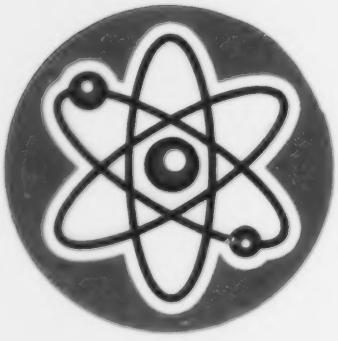
Science

Alberta Authorized Resource List and Annotated Bibliography

Science Grades 7–9



November 2005

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The primary intended audience for this document is:

Administrators	
Counsellors	
General Audience	
Parent School Councils	
Parents	
Students	
Teachers	✓

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OVERVIEW

Alberta Education Authorized Resource Categories

This list of Science resources, Grades 7, 8 and 9, contains resources that have been authorized for use in Alberta schools. Alberta Education selects and authorizes the best possible instructional materials for the implementation of approved programs of study. The resource authorization categories are **student basic**, **student support** or **teaching**, and the status is noted for each resource.

> **Student Basic** learning resources are those student learning resources authorized by Alberta Education as the most appropriate for addressing the majority of outcomes of the course(s) or substantial components of the course(s); or the most appropriate for meeting general outcomes across two or more grade levels.
>
> **Student Support** learning resources are those student learning resources authorized by Alberta Education to assist in addressing some of the outcomes of the course(s) or components of the course(s); or to assist in meeting the outcomes across two or more grade levels.
>
> **Teaching** resources are those teaching resources identified as the best available resources to support the implementation of programs of study and courses; they may be teacher guides to accompany student resources or teacher professional resources. The authorized teaching guides are listed with the student resources.

The list of these resources is organized by grade and by unit (Unit A to Unit E) within each grade.

> **Note:**
>
> Alberta Education strongly recommends that teachers read all selections in the student resources and all activities in the teacher guides prior to using them with students. Careful consideration should be given to the sensitivities of both the student audience and the community.

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Annotated Bibliography

Annotations for junior high science resources are included in alphabetical order at the end of each grade. The annotations identify the grade(s) and unit(s) the resource is authorized for, a brief description of content, publisher, copyright date and purchasing information.

Availability

Most of the new Alberta resources are available for purchase from:

Learning Resources Centre
12360 – 142 Street, Edmonton, AB T5L 4X9
Telephone: (780) 427–5775
Fax: (780) 422–9750
Internet: <http://www.lrc.education.gov.ab.ca>

LRC order numbers and prices (as of the printing of this booklet) are included for each resource.

Those resources which must be purchased directly from the vendor/distributor are so noted on the authorized list and on the annotation. A listing of vendors/distributors is provided at the end of this booklet.

Authorized Science Resources

Note:

For a **complete** list of Science resources, consult the Learning Resources Centre *Buyers Guide*. Some of the older resources will be withdrawn from authorized status in the year(s) ahead.

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Science

Grade 7

November 2005

GRADE 7
Units A, B, C, D, E

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Basic Learning Resources				
Addison Wesley Science in Action 7 Series				
Addison Wesley Science in Action 7 (Student Text)	2001	**Basic** 7A / 7B / 7C / 7D / 7E	449662	$73.45 LRC
Addison Wesley Science in Action 7: Teacher's Resource Package	2001	Authorized Teaching 7A / 7B / 7C / 7D / 7E	449688	$260.60 LRC
ScienceFocus 7 Series				
ScienceFocus 7: Science • Technology • Society (Student Text)	2001	**Basic** 7A / 7B / 7C / 7D / 7E	449703	$76.20 LRC
ScienceFocus 7: Science • Technology • Society: Illustrations CD-ROM (Macintosh / Windows Version)	2001	Authorized Teaching 7A, 7B, 7C, 7D, 7E	451857	$197.10 LRC
ScienceFocus 7: Science • Technology • Society: Teacher's Productivity Package (Macintosh / Windows Version)	2001	Authorized Teaching 7A, 7B, 7C, 7D, 7E	508418	$157.70 LRC
ScienceFocus 7: Science • Technology • Society: Teacher's Resource Binder (with Blackline Masters on CD-ROM) (Windows/Macintosh)	2001	Authorized Teaching 7A / 7B / 7C / 7D / 7E	449711	$268.30 LRC

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GRADE 7

Unit A - Interactions and Ecosystems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Animal Interdependency; Endangered & Extinct Animals; Food Chains *Animal Life in Action Series*	2000	Support 7A		LRC
		Animal Interdependency (Video)	480872	$56.80
		Endangered & Extinct Animals (Video)	480880	$56.80
		Food Chains (Video)	480898	$56.80
The Barrens Quest	1997	Support 7A		Out-of-print
NEW Biodiversity *Bill Nye the Science Guy Series*	1998	Support 7A	606551	$46.30 LRC
Burns Bog: A Road Runs Through It	1999	Support 7A	468018	$57.90 LRC
Coral Reefs: Vanishing Treasures (Video and Teacher's Guide)	1999	Support 7A (Marlin Motion Pictures Ltd.)		Vendor Direct
The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7E	470386	$86.05 LRC
The Digital Field Trip to the Rainforest (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7B	470427	$86.05 LRC
The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7B	470451	$86.05 LRC
Earth's Endangered Environments (Macintosh and Windows Version) *NGS PictureShow Series*	1994	Support 7A	511007	$108.95 LRC
Ecology (Macintosh Version 1.0 / Windows Version 1.1) *Biology Concepts Series*	1997	Support 7A	467911	$144.00 LRC
FEESA: Video Tour Part 2 (Forestry Field Trip)		Support 7A / 7B		Out-of-print
The Food Chain *Animal Life and Beyond Series*	1998	Support 7A	479015	$56.80 LRC
NEW Food Chains and Webs (with Teacher's Guide)	1998	Support 7A	495095	$124.10 LRC
NEW Food Web / Ocean Life *Bill Nye the Science Guy Series*	1998	Support 7A (Food Web) / 7A (Ocean Life) / 8E (Ocean Life)	563248	$46.30 LRC
Footprints in the Delta	2000	Support 7A	520876	$57.90 LRC
Great Northern Forest	1994	Support 7A	BPN 840201	ACCESS–The Education Station
Heat and Living Beings *Animal Life and Beyond Series*	1998	Support 7A / 7C	479023	$56.80 LRC

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GRADE 7 (continued)
Unit A - Interactions and Ecosystems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Horses of Suffield	1998	Support 7A	468026	$57.90 LRC
Marine Life *Animal Life and Beyond Series*	1998	Support 7A / 8E	479031	$56.80 LRC
NEW The Prairies *Water Under Fire Series*		Support 7A	BPN 20624 03	ACCESS–The Education Station
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
Sea Otters *Champions of the Wild Series*	1998	Support 7A	467995	$57.90 LRC
St. Lawrence River Belugas *Champions of the Wild Series*	1998	Support 7A	468000	$57.90 LRC
Succession	1994	Support 7A	482175	$69.50 LRC
NEW Sylva Boralis: From Snow and Fire	1998	Support 7A	606519	$115.90 LRC
Symbiosis: Nature's Delicate Balance	1995	Support 7A	510942	$57.30 LRC
NEW Temperate Deciduous Forests (Video with Guide)	1998	Support 7A	607757	$114.70 LRC
NEW Wetlands *Bill Nye the Science Guy Series*	1998	Support 5E / 7A / 8E	BPN 855257	ACCESS–The Education Station
NEW Wetlands: Cradles of Life	1995	Support 7A	563256	$56.80 LRC

Authorized Teaching Resources

Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
NEW From Both Sides: Module 1: Use of Pesticides	1997	Authorized Teaching 7A	534934	$11.80 LRC
Oceans - Climate Explorer (Windows / Macintosh Version) *Earthstation Library Series*	2000	Authorized Teaching 7A / 8E	472134	$114.75 LRC
Pollution *National Geographic Geokit Series*	1997	Authorized Teaching 7A	510992	$399.80 LRC
NEW Wetland Explorer (Windows/Macintosh Version 1.0 CD-ROM with Education Resources)	2002	Authorized Teaching 7A	538465	$311.85 LRC
Why Wetlands? Education Kit	1994	Authorized Teaching 7A	511966	$28.95 LRC

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GRADE 7
Unit B - Plants for Food and Fibre

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
A Closer Look at Plants (Macintosh / Windows Version)	2001	Support 7B	509771	$114.75 LRC
The Digital Field Trip to the Rainforest (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7B	470427	$86.05 LRC
The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7B	470451	$86.05 LRC
Farming *Bill Nye the Science Guy Series*	1998	Support 7B	BPN 855281	ACCESS–The Education Station
FEESA: Video Tour Part 2 (Forestry Field Trip)		Support 7A / 7B		Out-of-print
NEW Flowers *Bill Nye the Science Guy Series*	1998	Support 7B	BPN 855276	ACCESS–The Education Station
Plant Biodiversity; Plant Reproduction; Plant Structure and Growth; Plants & People: A Beneficial Relationship *Plant Life in Action Series*	2000	Support 7B		LRC
	Plant Biodiversity		479247	$76.00
	Plant Reproduction		479255	$76.00
	Plant Structure and Growth		479263	$76.00
	Plants & People: A Beneficial Relationship		479271	$76.00
Plant Reproduction *Plant World Series*	2000	Support 7B	478306	$191.20 LRC
Plant Structure and Function *Plant World Series*	2000	Support 7B	478281	$191.20 LRC
NEW Plants / Forests *Bill Nye the Science Guy Series*	1998	Support 7B	563230	$46.30 LRC
Plants: What it Means to be Green (Macintosh / Windows Version 3.0) *NGS PictureShow Series*	1998	Support 7B	510984	$108.95 LRC
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
The World of Plants *Plant World Series*	2000	Support 7B	478299	$191.20 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
People and Plants (with Teacher's Guide) *The World of Plants Series*	2000	Authorized Teaching 7B	513334	$69.50 LRC
Photosynthesis: Light into Life (Videocassette with Teacher's Guide)	1997	Authorized Teaching 7B	485509	$232.65 LRC
Plants *National Geographic Geokit Series*	1999	Authorized Teaching 7B	467937	$399.80 LRC

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GRADE 7
Unit C - Heat and Temperature

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW Chemical Reactions *Bill Nye the Science Guy Series*	1998	Support 7C	BPN 855224	ACCESS–The Education Station
Heat and Living Beings *Animal Life and Beyond Series*	1998	Support 7A / 7C	479023	$56.80 LRC
Molecular Motion *Science Key Concepts: Physics / Chemistry Series*		Support 7C	513342	$69.50 LRC
Properties of Matter *Physical Science in Action Series*	2000	Support 7C / 8A	480905	$75.35 LRC
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
Turning Down the Heat: The New Energy Revolution	1999	Support 7C	468034	$57.90 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Geology Explorer (Windows / Macintosh Version) *Earthstation Library Series*	2000	Authorized Teaching 7C / 7E / 8E	523028	$114.75 LRC

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GRADE 7

Unit D - Structures and Forces

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Architecture *Bill Nye the Science Guy Series*	1998	Support 7D	BPN 855287	ACCESS–The Education Station
Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0) *NGS PictureShow Series*	1998	Support 7D / 8B	467979	$82.80 LRC
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
The Skeletal System (2nd Ed. Revised) *Human Body Series*	1993	Support 7D	467820	$56.80 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 7D / 8B	467953	$90.40 LRC

GRADE 7
Unit E - Planet Earth

Support Learning Resources

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
All About Rocks and Minerals (Video and Teacher's Guide) *Basics of Geology Series*	1998	Support 7E (Marlin Motion Pictures Ltd.)		Vendor Direct
The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2) *The Digital Field Trips Series*	2001	Support 7A / 7E	470386	$86.05 LRC
NEW Earth's Crust *Bill Nye the Science Guy Series*	1998	Support 7E	BPN 855202	ACCESS–The Education Station
NEW Earthquakes *Bill Nye the Science Guy Series*	1998	Support 7E	BPN 855264	ACCESS–The Education Station
Formations of Continents and Mountains *Basics of Geology Series*	1998	Support 7E (Marlin Motion Pictures Ltd.)		Vendor Direct
Fossils *Bill Nye the Science Guy Series*	1998	Support 7E	BPN 855285	ACCESS–The Education Station
NEW The History of the Earth: Over the Eons; The Geology of the Earth: Of Forces, Rocks, and Time *Survey of Science Series: Earth Science Essentials Series*	1996	Support 7E The History of the Earth: Over the Eons The Geology of the Earth: Of Forces, Rocks, and Time	 606543 606569	LRC $156.45 $156.45
Oceans: Charting the Vastness *Survey of Science: Earth Science Essentials Series*	1996	Support 7E	510950	$114.75 LRC
Plate Tectonics: Earthquakes, Volcanoes and Mountains (Video and Guide) *Earth Science Series*	1998	Support 7E	482191	$69.50 LRC
NEW Rocks and Soil *Bill Nye the Science Guy Series*	1998	Support 7E	BPN 855244	ACCESS–The Education Station
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
NEW Understanding Earthquakes *Science Screen Report for Kids Series*	2002	Support 7E	BPN 2069503	ACCESS–The Education Station
Volcano *Eyewitness Series*	1996	Support 7E	467797	$11.00 Out-of-Print
NEW Volcanoes *Bill Nye the Science Guy Series*	1998	Support 7E	BPN 855268	ACCESS–The Education Station
Water Erosion and Landforms (Video and Guide) *Earth Science Series*	1998	Support 7E / 8E	482183	$69.50 LRC
What Are Glaciers? *Earth, the Environment and Beyond Series*	1992	Support 7E / 8E	467838	$56.80 LRC
What Are Volcanoes? *Earth, the Environment and Beyond Series*	1992	Support 7E	467812	$56.80 LRC

GRADE 7 (continued)
Unit E - Planet Earth

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Dynamic Earth *National Geographic Geokit Series*	1998	Authorized Teaching 7E	467929	$399.80 LRC
Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 7E / 8E	470493	$90.40 LRC
Geology Explorer (Windows / Macintosh Version) *Earthstation Library Series*	2000	Authorized Teaching 7C / 7E / 8E	523028	$114.75 LRC
NEW Igneous and Metamorphic Rocks *Rocks and Minerals Series Series*	2001	Authorized Teaching 7E	539257	$191.20 LRC
NEW Minerals and Their Properties *Rocks and Minerals Series Series*	2001	Authorized Teaching 7E	539249	$191.20 LRC
Rocks and Minerals: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 7E	470500	$90.40 LRC
NEW Rocks and the Rock Cycle *Rocks and Minerals Series Series*	2001	Authorized Teaching 7E	539231	$191.20 LRC
NEW Sedimentary Rocks *Rocks and Minerals Series Series*	2001	Authorized Teaching 7E	539223	$191.20 LRC

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Grade 7: Annotated Bibliography (alphabetical listing)

	LRC Order No.:	Est. Price:
Addison Wesley Science in Action 7 (Student Text)	**449662**	**$73.45**
Addison Wesley Science in Action 7: Teacher's Resource Package	**449688**	**$260.60**

Addison Wesley Science in Action 7

Basic / Authorized Teaching Resource

© 2001 **Author(s):** Booth, C. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓										

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 7 Science. Together these resources provide an extensive set of learning activities and planning tools for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes an introductory outline and summary review section with each chapter, a science toolbox for skill development and a glossary of key terms. The teacher resource includes general sections on skill development, student assessment, and lists of required materials and equipment. Detailed sections in each unit include an overview, instructional suggestions, and several sets of blackline masters targeting a range of instructional and assessment needs.

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LRC Order No.: Est. Price:

All About Rocks and Minerals (Video and Teacher's Guide)

Basics of Geology

Support Resource

Vendor Direct

© 1998

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3
Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video explores the formation and characteristics of rocks and minerals. Using a flow chart, animation, and examples of natural geological features, the video effectively illustrates the rock cycle. The formation of igneous, sedimentary, and metamorphic rocks is described in some detail, along with examples of rocks in each class. The video shows how the process of crystallization leads into an array of crystals with their characteristic shapes. Other features of minerals such as hardness and cleavage are identified, along with the way to test for each property. The resource also looks at the continued discoveries of useful resources (such as oil) in the earth's crust, and researchers' development of new ways to extract them. The video uses a traditional style of presentation with a focus on scientific content. Blackline masters and a teacher's guide can be viewed and printed online at «www.unitedlearning.com».

	LRC Order No.:	Est. Price:
• **Animal Interdependency**	**480872**	**$56.80**
• **Endangered & Extinct Animals**	**480880**	**$56.80**
• **Food Chains**	**480898**	**$56.80**

Animal Life in Action

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

• *Animal Interdependency*: This video explores the interdependency of animal life, categorizing animal dependency into several types. The video explains the concepts of food chains and food webs, providing a description of photosynthesis and examples of simple food chains and webs. The video also describes the ecological role of decomposers and consumers in recycling matter and maintaining balanced populations. After introducing the concept of symbiosis through a simple experiment presented by two students, the video explores different symbiotic relationships that exist, illustrated by visual footage of parasitism, commensalism, mutualism and cooperation. The resource also examines the concept of ecosystem, looking at the disruptive effects that natural disasters and human impact have on existing animal relationships. Finally, the video presents some unexpected relationships that develop between animals in zoos.
Note: A portion of this video overlaps in content with the *Animal Life in Action - Food Chains* video in its narration and visual content.

• *Endangered & Extinct Animals*: This video deals with extinction as a normal endpoint for most organisms. It points out that extinction is generally a gradual process; relatively rapid extinctions like that of the dinosaurs are caused by a sudden climatic change set off by a natural catastrophe. The video goes on to identify human intervention as the main cause for the disappearance of species today, addressing the effects of habitat destruction, chemical pollution and use of pesticides. The video discusses ways of assessing environmental quality, and features a student-narrated segment on the determination of nitrate content in a water sample. The resource finishes with a discussion of laws passed to protect endangered species, and describes ways that people have contributed to the protection of threatened animals, particularly those jeopardized by oil spills.

• *Food Chains*: This video focuses on the concept of energy flow, explaining the process of photosynthesis and providing examples of simple food chains to show how the sun's energy is the source of all life on earth. The video presents both terrestrial and aquatic food chains and shows examples of how the overlapping of food chains leads to food webs. The narration integrates related scientific terms such as producer, primary and secondary consumer, ecosystem, biomass, and energy pyramid. The biochemical role of decomposers is explained, with reference made to specific chemical compounds released by their action. The resource also deals with the pyramids of energy and biomass, human impact on the balance of nature, and the impact of natural disasters on animal populations. The video finishes with a student-led experiment to show the progression of microorganisms that appear in a boiled hay infusion.

LRC Order No.: Est. Price:

Architecture

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855287

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓											

In this video, Bill Nye gives viewers a comprehensive overview of the planning, design, and construction of buildings. His "form follows function" approach encompasses considerations such as location, appearance, materials choice, and the use of scale models. Examples of infrastructure, trusses, arches, domes, geodesic domes, and planning views are given. The program finishes with a look at the melding of science and art in earthquake resistant pagodas.

Out-of-print

The Barrens Quest

Support Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video explores the destructive environmental impacts of mineral development in the Northwest Territories, as well as the complex changes that people in the region are now facing. The government's approval process of the Ekati diamond mine is analyzed to identify limitations, and local people are interviewed to present their views on the issues and concerns connected with the mine. These issues are also explored through the story of one man's quest to find the fabled breeding grounds of the Eskimo Curlew, a once common bird that is now near extinction. Through the story of Joachim Obst and others, the video makes an emotionally affecting case for planned conservation in one of the last unspoiled wilderness regions left in the world.

LRC Order No.: 434803 Est. Price: $11.80

Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)

Authorized Teaching Resource

© 2000 **Author(s):** Agban, J. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

606551 $46.30

Biodiversity

Bill Nye the Science Guy

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

The biodiversity segment supports Unit 7A: Interactions and Ecosystems. This engaging video has Bill explaining how biodiversity creates a healthy ecosystem because of the interdependency of living things. Vivid pictures, catchy music, and time lapse photography create a high interest resource. Bill advocates responsible stewardship of the Earth and gives simple examples of good personal actions. More examples of interesting stuff to do are found inside the case cover.

© Alberta Education, Alberta, Canada

LRC Order No.: 468018 Est. Price: $57.90

Burns Bog: A Road Runs Through It

Support Resource

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This 25-minute video explains the bog ecosystem, its species and their interactions and interdependencies. In light of this information, the video then addresses the environmental impact of human activity and encroachment as a cause of species' endangerment.

Chemical Reactions

Bill Nye the Science Guy

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855224

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓												

In his dynamic style, Bill Nye uses explosive examples to show that everything is made of chemicals. In the process, he covers the fundamentals of chemistry, specifically exploring chemical properties and reactions and how chemists describe and represent such changes in matter. He takes viewers through the visual changes and the changes at the molecular level as they occur in combustion, hydrolysis, the chemistry of photography, acids and bases, gold plating, and pyrotechnics. Along the way he covers basic structural representations of molecules and formulae, the work of Alfred Nobel, the periodic table and the concept of endo-exothermic reactions.

LRC Order No.: 509771 Est. Price: $114.75

A Closer Look at Plants (Macintosh / Windows Version)

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This CD-ROM lets users access a wealth of information about non-vascular and vascular plants, including details on plant microanatomy, plant structures, life cycles, and plant processes such as transpiration, photosynthesis, and growth. It also presents a number of plants that are used for food or for medical purposes. The resource contains over 200 images showing 75 species of plants, and includes a ten-minute animation of the process of photosynthesis. A "Topic Locator" is provided, allowing students to find specific information quickly and easily.

Coral Reefs: Vanishing Treasures (Video and Teacher's Guide)

Vendor Direct

Support Resource

© 1999

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3

Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video explores human impact on coral reefs around the world. The large variety of plants and animals on healthy reefs is compared to the relative lack of life on reefs destroyed by human activity. From the islands of Palau in the Pacific Ocean to the Florida Keys, local individuals discuss the value of reefs to people in their communities and the changes that have occurred to reefs in their area. It becomes clear why coral reefs are called "vanishing treasures." Local and global initiatives to save coral reefs are explored along with the social dilemmas each initiative faces. This is a great introduction to the study of marine ecosystems and biomes, with an emphasis on conservation, human impact and social issues.

LRC Order No.: 470386 Est. Price: $86.05

The Digital Field Trip to the Desert (Macintosh / Windows Educational Version 1.2)

The Digital Field Trips

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓				✓										

In this resource, students are taken on a series of "virtual" field trips to five desert locations in the southwestern United States. As students travel down the trails in each location, they are able to view landscapes from stations along each trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are used in this interactive resource. Concepts developed include climate, landscape formation, adaptations for plant and animal survival, and homeostasis. The resource includes a 66-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

Note:

- A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

© Alberta Education, Alberta, Canada

LRC Order No.: 470427 Est. Price: $86.05

The Digital Field Trip to the Rainforest (Macintosh / Windows Educational Version 1.2)

The Digital Field Trips

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓													

In this resource, students are taken on a "virtual" field trip to Belize, Central America, to experience the sights and sounds of the rainforest. Students are able to view the landscape from a series of stations along a trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are used in this interactive resource. Concepts developed include interdependence of plants and animals, ecological cycles, and effects of humans on the rainforest ecosystem. The resource includes a 65-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

Note:

- A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

LRC Order No.: 470451 Est. Price: $86.05

The Digital Field Trip to the Wetlands (Macintosh / Windows Educational Version 1.2)

The Digital Field Trips

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓													

In this resource, students are taken on a "virtual" field trip to Algonquin Park in Ontario, to experience the sights and sounds of a bog. Students are able to view the landscape from a series of stations along a trail, turn in all directions, and zoom in on plants and animals. Video clips, animations, narrations, games, quizzes and full-colour photographs are all used in this interactive resource. Concepts developed include tropic levels, nutrient cycles, the formation of bogs, and interactions within the bog ecosystem. The resource includes a 44-page teacher guide, student masters, and one CD-ROM for stand-alone use. Workbook materials are provided in electronic format, allowing teachers to adapt exercises to student needs.

Note:

- A site-license version of this resource—allowing unlimited use in one school—is also available from the resource developer.

Dynamic Earth

467929 $399.80

National Geographic Geokit

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This comprehensive teaching package teaches students about earthquakes, volcanoes, and the role of plate tectonics in shaping the Earth. Students can view volcanic eruptions and earthquakes; discover how mountain ranges, deep-sea rifts, volcanoes, and earthquakes are created; and learn how plate tectonics relate to natural disasters. The resource also includes explanations and activities to show students how to locate earthquake epicenters and plot volcanoes on the "Ring of Fire." The kit includes three videos, two maps, a class pack of National Geographic magazine articles, four transparencies, student handout/worksheet masters, and trivia cards. The teacher's guide offers hands-on activities and Internet exercises to actively engage students in their own learning. Assessment options are also provided.

LRC Order No.: 470493 Est. Price: $90.40

Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This teacher resource provides a set of 40 transparencies that show evidence of the dynamic Earth, including illustrations of folding, faulting, volcanoes, plate movements, mountain formation, glaciation, erosion and deposition. The illustrations consist mainly of photographs, but artwork depicting and explaining crustal movements is also included. A teacher's guide provides a paragraph of background information on each transparency and briefly outlines six mini-lessons that are based on use of the transparencies.

Earth's Crust

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855202

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

Bill Nye cuts through the earth to share facts about the crust. With innovative animation and analogous demonstrations he exposes the inner structure of the earth to provide the basis for plate tectonics and rationale for volcanoes and earthquakes. He justifies the liquid nature of the earth's core with a creative demonstration using a flashlight and tin can. He visits the crater of Mt. St. Helens to interview a volcanologist and to show plant and animal regeneration on the lava flows. The heat of the inner crust is exemplified by lava flows and geysers and emphasized with amusing demonstrations. In his eclectic style, he's off to visit limestone caverns, digs for sapphires, and grows minerals. He has the Magmadonna sing the song "Crust" and a rock group completes the video with a song about rocks. The video is brought to you by the soft drink "Molten Lava." This resource supports the grade 7 Science Program, Unit E: Planet Earth, Outcomes 1 & 2.

LRC Order No.: 511007 Est. Price: $108.95

Earth's Endangered Environments (Macintosh / Windows Version)

NGS PictureShow

Support Resource

© 1994

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This CD-ROM provides two 12-minute narrated picture sequences that describe endangered environments. "Rainforests" and "Wetlands" each provide images of a wide range of living things and identify problems that have led to habitat destruction. The CD-ROM also includes brief sections of Student Information, Classroom Activities, and Assessment Questions.

Note:

• The limited scope of these additional sections and technical limitations in navigating the CD-ROM are weaknesses in this otherwise useful resource.

Earthquakes

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855264

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

Earthquakes are a fascinating earth phenomenon on one hand, but can be a terrifying event to experience. This informative video by Bill Nye the Science Guy first explains the causes of earthquakes by uncovering what makes big pieces of Earth's crust move. In doing so, Bill visits with scientists who study and measure earthquakes. He then explains what to have on hand in case of an earthquake and strategies that reduce chance of harm. This video features an interactive question-and-answer format as well as hands-on activities. Also included is a teacher's guide filled with suggestions for extension activities and classroom experiments.

LRC Order No.: **467911** Est. Price: **$144.00**

Ecology (Macintosh Version 1.0 / Windows Version 1.1)

Biology Concepts

Support Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This CD-ROM program explores a number of fundamental ecological concepts that provide a foundation for understanding the natural world. The program consists of four units. Unit 1 provides an overview of the relationships of living things with their environment. It covers the concepts of ecosystem, community, population, habitat and niche. Unit 2 looks at nature's cycles and ecological succession. Unit 3 explores the interrelationships of organisms, with a major focus on the producer-consumer-decomposer relationship and the three types of consumers: herbivores, carnivores and omnivores. Unit 4 explores the more common biomes of the earth with their characteristic climates, plants and animals. Each unit includes a video clip providing visual examples of the concepts and details discussed. The program also includes a section on video vocabulary, inquiries of three specific ecological topics, and a final review.

Farming

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855281

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

In this video, Bill Nye provides the big picture of what farming is about, reminding viewers that most of our food comes from farms. Nye provides a quick survey of techniques used for planting, enhancing growth and harvesting, using a variety of crops as examples. The video then describes soil contents and soil fertility, emphasizing what makes soil fertile. This leads into a brief segment on organic farming and techniques for managing soil and water.

Note:

- Nye describes farming as a "science" rather than a technology.

© Alberta Education, Alberta, Canada

LRC Order No.: Est. Price:
Out-of-print

FEESA: Video Tour Part 2 (Forestry Field Trip)

Support Resource

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓													

In this video two narrators guide the viewer through a series of short "field trips" that introduce the viewer to some applications of forest study and forest technology in Alberta. The video contains four sequences, each set up as a separate section with its own introduction and wrap-up.
1. "Fire in the Forest" - Origins of forest fires, fire detection and fire control are shown within an Alberta context, with emphasis on the technologies involved. The role of fire within the cycle of forest life is also described.
2. "Understanding the Forest" - Techniques for study, inventory and research on living things found in forest lands are described. Examples of quantitative measures are shown: studies of tree growth, population counts, measures of age and range.
3. "Wood Products" - Use of aspen poplar trees in the manufacture of oriented strand board and medium density fibreboard is described and illustrated.
4. "Changes in the Forest" - Factors that lead to change in forests are described, including tree diseases, insect pests, severe weather, and human actions leading to tree cutting.

Flowers

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855276

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

Bill Nye, the Science Guy, shows how flowers are more than pretty faces: they contain parts that enable plants to reproduce by making seeds. He uses close-up photography and models to show flower structure, and highlights ways that flowers and some insects depend on each other. The concept of fruits and vegetables and their role in human food is explored and the distribution of seeds through natural processes is described. This fast-paced 24-minute video provides a general introduction to flowers; the most useful part of this program for grade seven students is the first ten minutes.

LRC Order No.: 479015 Est. Price: $81.10

The Food Chain

Animal Life and Beyond

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video describes the process of converting solar energy to the energy in food, and the further transfer of energy through food chains. Key steps in photosynthesis are explained and illustrated through animations. Food pyramids and trophic levels are illustrated using a variety of animal examples.

Food Chains and Webs (with Teacher's Guide)

495095 $124.10

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

Take a tour through food chains to see what links them together and how they build food webs. Dr. Brian Jerome goes fly-fishing in Vermont's White River watershed and takes time to examine the transfer of energy and matter through living things and why organisms are interlinked. He begins with producers and the vital role they play as photosynthesizers. He describes the flow of energy and matter through a chain of organisms beginning with phytoplankton and other plants in the area. He shows how these food chains are interlinked and how decomposers help recycle matter to reuse. Pyramids of energy and biomass demonstrate that decreasing amounts of energy are available at each trophic level of food chains. He deals with biomagnification of contaminants such as DDT and reflects on the impact human activity has had on Atlantic Salmon in the White River watershed.

LRC Order No.: 563248 Est. Price: $46.30

Food Web / Ocean Life

Bill Nye the Science Guy

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

• Food Web: Bill Nye explores food chains as they take him through a tangle of a food web and up a food pyramid. In his humorous eclectic style, he first describes the role of plants and how living things are interconnected. Throughout the video, primary focus is placed on humans and the plants and animals that make up their food. He builds some simple food chains from the animal and plant contents of a hamburger. Plants, as producers of food and oxygen are shown to play a valuable role is sustaining life on earth, as do decomposers. Photosynthesis is described and a simple experiment is demonstrated to show the importance of light to plants. The ecological importance of plants is demonstrated through the analysis of a pizza to show how everything in it originates from plants. The needs of plants are also briefly discussed through a look at hydroponics. The video finishes with a student field trip to a wetland ecosystem in Alabama which is in jeopardy of being destroyed by a proposed highway. This resource supports the grade 7 Science Program, Unit A, Outcomes 1, 2 & 4 and Unit B, Outcomes 1 & 2.

• Ocean Life: Bill Nye takes an ocean view of food chains and food webs. In his humorous unconventional style, he begins with the enormity of microscopic phytoplankton and zooplankton identifying some common forms and describing their niche in the ocean world. He also looks at krill in the South Seas and baleen whales that rely on them for food. He presents a number of plant species including sea grass and eel grass that form the basis of ocean food chains. The ecological role of ocean plants as producers of food and free oxygen is emphasized. A food web is constructed to show the linkage of food chains. Feeding strategies and associated adaptations are also explored, particularly those of the jellyfish and the baleen whales. The function of streams in replenishing ocean nutrients is briefly discussed. The video culminates with the notion that ocean ecosystems, like those on land, are in delicate balance, not to be tampered with if we are to maintain a healthy biosphere. This resource supports the grade 7 Science Program, Unit A, Outcomes 1 & 2 and Unit B, Outcomes 2. It also supports the grade 8 Science Program, Unit E: Freshwater And Saltwater Systems, Outcome 3.

LRC Order No.: 520876 Est. Price: $57.90

Footprints in the Delta

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video tells the story of how the W.A.C. Bennett hydro-electric dam has altered the ecosystem in the Peace-Athabasca River delta region. Since the building of the dam in 1967, the area's lakes and wetlands have dried up significantly, with disastrous impacts on the vegetation and wildlife of the region. The decline in the muskrat population in particular has had critical effects on the Aboriginal community of Ft. Chipewyan, which supported itself through the fur industry. Scientists and aboriginal people are interviewed to give their perspectives on what has happened. Satellite images, aerial views and ground level photography provide visual evidence of the ecological changes, while animation and photography help explain why they have occurred. The video is a thought-provoking look at what happens when major projects are undertaken without any environmental impact studies.

© Alberta Education, Alberta, Canada

LRC Order No.: Est. Price:

Formations of Continents and Mountains

Basics of Geology

Support Resource

Vendor Direct

© 1998

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3
Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

The dynamic nature of the earth's crust is clearly presented in this two-part video. With the use of a model and animation, the earth's internal layers are described and correlated to volcanic activity, earthquakes, mountain formation, and continental drift. A history of the earth's crust is presented, starting with the volcanic origin of the continents followed by the gradual shift of the earth's plates from the supercontinent Pangea to their present positions. Sea floor spreading, subduction, thrusting, folding and faulting, and mountain formation are explored within the framework of the Plate Tectonics Theory. With the use of animations, the video effectively explains the cause of volcanoes and earthquakes. The resource concludes with a summary of main ideas and a set of review questions.

LRC Order No.: Est. Price:

Fossils

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855285

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

In this video, Bill Nye is joined by field geologists to explain what fossils are and how they are formed. Nye shows how fossil evidence, together with our knowledge of present life forms, provides images of life in the past, including rhinoceroses, ferns, fish, trilobites, dinosaurs and birds. The process of fossil formation is shown through animations, and through a mold-and-cast activity that students can try on their own.

Note:

• The video uses humorous commercial messages and a rock music segment to convey information in an engaging manner. Some teachers may find this style too tongue-in-cheek.

From Both Sides: Module 1: Use of Pesticides

534934 $11.80

Authorized Teaching Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This resource explores the use of pesticides in North America. Through a series of ten activities students develop a better understanding of the problems connected with pesticide use as well as the benefits. They identify environmental problems associated with agriculture, differentiate between fact, bias, and opinion, develop a position based on research, and apply the knowledge about pesticides to a local environmental issue. Environmental issue scenarios are provided along with the necessary background information about various pesticides used in North America. This self-contained resource does a thorough job exploring intended and unintended consequences of human use of chemicals to control pests in agriculture.

© Alberta Education, Alberta, Canada

Geology Explorer (Windows / Macintosh Version)

LRC Order No.: **523028** Est. Price: **$114.75**

Earthstation Library

Authorized Teaching Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓		✓					✓					

Geology Explorer is a multimedia study of planet Earth from core to crust. Lessons cover topics such as rocks and minerals, weathering and plate tectonics, all through the perspective of earth scientists. The resource contains approximately 600 MB of educational content, including hundreds of photographs, detailed captions and text, digital video, 3D animations, charts, music, sound effects, and narration. In addition, the CD-ROM includes interactive exercises and projects such as virtual experiments, demonstrations, mini-games and puzzles. Multiple choice tests, a sample lesson on plate tectonics, an extensive glossary and a connection to EOA Scientific Systems Inc.'s *Earth Station Internet Campus* are included. A teacher's manual and user's guide are also provided on the CD-ROM.

Great Northern Forest

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 840201

© 1994

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video explores one of the great biomes of our planet, the boreal forest. The video follows the activity in the forest through the four seasons. It provides a good overview of the species that exist in this vast forest region and the adaptations they have developed to survive in the harsh climate that characterizes this part of the world. This video could be used as an effective springboard to discussing ecological concepts connected with the Interactions and Ecosystems unit.

LRC Order No.: 479023 Est. Price: $81.10

Heat and Living Beings

Animal Life and Beyond

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓		✓												

This video explores various ways that plants and animals adapt to different temperature conditions in the natural environment. Examples of ectomorphs (cold-blooded animals) and endomorphs (warm-blooded animals) are shown, as well as adaptations occurring in a variety of plant species. Structural and behavioural adaptations covered in the video include surface covering, size, shape, distribution in the environment, and movements during the day. The concept of plant succession is also briefly introduced.

Horses of Suffield

468026 $57.90

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video describes the fragile grassland area in Southern Alberta and the inability of the area to support the wild horses that lived there. It then presents the controversy that surrounded the removal of the horses from the area.

LRC Order No.: 467953 Est. Price: $90.40

Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓			✓								

This resource is a visual library of images illustrating several human body systems. It explains the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. The kit includes 40 overhead transparencies and a teacher's guide with captions and activities.

Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0) **467979 $82.80**

NGS PictureShow

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓			✓								

This CD-ROM consists of two self-contained shows that introduce the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. In "Bones and Muscles," students can explore the skeletal framework that supports the body and the muscular system that allows the body to move and manipulate objects. In "Nervous and Endocrine Systems," they can discover the complex communication systems that link and control all the body functions and give us the ability to think and create. The resource also explains how these systems gather information through our senses, analyze the information, and then take action. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and a user's guide.

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LRC Order No.: 539257 Est. Price: $191.20

Igneous and Metamorphic Rocks

Rocks and Minerals Series

Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video describes the characteristics and properties of igneous and metamorphic rocks. Video sequences show how heat, pressure and chemical reactions can result in formation of rocks, or transformaton from one type of rock to another. The classification of metamorphic and igneous rocks is explained using a variety of rock types as examples. Concepts developed include extrusive rock, intrusive rock, lava, plutons, contact metamorphism, regional metamorphism, foliated rocks, and parent rock.

Marine Life

479031 $81.10

Animal Life and Beyond

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

This video describes the diversity of living things found in ocean environments. Examples of pelagic organisms (surface dwelling and free swimming) and benthic organisms (bottom dwelling) are shown. Key features of marine environments are described, and adaptations to those environments are illustrated and explained.

LRC Order No.: 539249 Est. Price: $191.20

Minerals and Their Properties

Rocks and Minerals Series

Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video explores the properties of minerals and provides a brief introduction to the variety of mineral resources found on earth. The crystal structure of minerals, and the methods by which minerals form, are shown through photographs and animations. Six major physical properties of minerals are described and clearly illustrated. Everyday uses of many minerals are shown. Concepts developed include lustre, streak, colour, cleavage and fracture, specific gravity, hardness, Mohs scale, ore, metals, and gemstones.

Molecular Motion

513342 $69.50

Science Key Concepts: Physics / Chemistry

Support Resource

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓												

This video looks at molecular motion and its effects on matter. The kinetic theory of matter is explained and applied to changes in state of matter, Brownian Motion and diffusion. The direct relationship between temperature and kinetic energy of ions and molecules is shown, as well as the inverse relationship between size of the particles and rate of diffusion. The effects of pressure on gases is also explored.

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LRC Order No.: 510950 Est. Price: $114.75

Oceans: Charting the Vastness

Survey of Science: Earth Science Essentials

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

Oceans cover over 70% of the earth's surface and have a significant influence on the planet's geology, life, and climate. This video explores the geology of the ocean floor, the composition of ocean water, the dynamics of ocean currents and tides, the formation of shoreline features, and the influence of the ocean on weather patterns. Effective animation is used to illustrate tide formation. The video also outlines the diversity of marine life in tidal pools, estuaries, kelp forests, and around deep sea vents. The video closes with a look at oil, gas and other resources and their extraction from below the sea.

Oceans - Climate Explorer (Windows / Macintosh Version)

472134 $114.75

Earthstation Library

Authorized Teaching Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

This interactive multimedia resource focuses on oceanography and meteorology, providing a comprehensive exploration of the relationships between water and Earth's climate. Over 600 MB of exercises, images, videos, games, experiments, demos and puzzles are included in the program. The video clips cover topics ranging from the structure of the ocean to human activities and climate. An extensive glossary is also provided.

Note:

- This is a resource for teachers, but is also suitable as a reference source for more advanced students.

People and Plants (with Teacher's Guide)

LRC Order No.: 513334 Est. Price: $69.50

The World of Plants

Authorized Teaching Resource

© 2000 **Author(s):** Colgren, J.; Fuqua, P. (Teacher 's Guide)

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This 10-minute video, with five minutes of quiz, introduces students to various uses of plants in our lives. The video describes, in a visually pleasing manner, human uses of plants as sources of food, medicine and raw materials. The narration, however, is directed at a much younger audience in terms of pacing and vocabulary. A teacher guide accompanies the video and allows for extension activities as well as assessment of student understanding.

Photosynthesis: Light into Life (Videocassette with Teacher's Guide)

Out-of-print

Authorized Teaching Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This video explores the role of plants as natural solar collectors, converting solar energy into a usable form for themselves and all other life forms. The video uses colour animation, live-action photography and diagrams to enhance visual learners' understanding of photosynthesis as well as the energy releasing process of cellular respiration. Chemical equations for both processes are reviewed and the importance of glucose and oxygen are highlighted. The video examines leaf and chloroplast structure to show the role of chlorophyll and other pigments in trapping sunlight. Both light and dark reactions are explained with an appropriate amount of biochemistry. The teacher's guide provides a program summary and student activities.

	LRC Order No.:	Est. Price:
• **Plant Biodiversity**	**479247**	**$56.80**
• **Plant Reproduction**	**479255**	**$56.80**
• **Plant Structure and Growth**	**479263**	**$56.80**
• **Plants & People: A Beneficial Relationship**	**479271**	**$56.80**

Plant Life in Action

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

• *Plant Biodiversity*: This video explains the origins and evolution of plant species, emphasizing the wide variety of habitats that plants have adapted to, the structures that different plants have developed to succeed in their environments, and the effects of climate on plant diversity. The resource also explores the differences between vascular and nonvascular plants, explains how the development of seeds allowed plants to dominate the landscape, and identifies some differences between cone-bearing gymnosperms and flowering angiosperms.

• *Plant Reproduction*: This video explores the many different features that plants have developed in order to survive and reproduce. The resource explains how primitive mosses and algae are dependent upon water for their reproduction, and how the rise of fruit-bearing angiosperms as the dominant plants on Earth is due to the evolutionary success of flowers as a reproductive feature. Diagrams and microscopic photography illustrate the structures involved in flower pollination, beginning with the transfer of pollen from stamen to pistil and continuing through the development of seeds and fruit. A hands-on experiment suitable for the classroom also allows students to explore the concept of vegetative propagation and the benefits of this type of reproduction.

• *Plant Structure and Growth*: This video explains how plant cells are organized to form specialized tissues like xylem and phloem. Using diagrams and microscopic photography, the video illustrates how plant structures form systems that support plant growth. The resource then describes the movement of water, minerals and food through a plant's systems. A hands-on activity to investigate geotropism and observe how plants react to their environment is included.

• *Plants & People: A Beneficial Relationship*: This video explores how plants and animals interact, cooperate and compete, highlighting how the constant exchange of nutrients and gases between plants and animals assures their interdependency. The video explains how animals are vital to the reproductive process of many plants and how animals rely on plants for food and shelter. The resource also includes a hands-on experiment exploring how plants depend upon animals for pollination and whether or not a flower's colour is responsible for reproductive success.

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Plant Reproduction

Plant World

Support Resource

© 2000

LRC Order No.: **478306** **Est. Price:** **$191.20**

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

Using vivid images and engaging animations, this program describes how plants reproduce. The video addresses the wide variety of reproductive strategies found in different types of plants including both seedless and seed plants, as well as asexual and sexual forms of reproduction. Colourful animations are used to illustrate seed fertilization and development. Some of the terminology discussed includes spores, alternation of generations, cones, flower, ovule, pollen, pollination, sepal, petal, stamen, pistil, fertilization, and growth.

Plant Structure and Function

Plant World

Support Resource

© 2000

478281 **$191.20**

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

In this program, students will learn how the structures of plants enable them to live and grow. Referring to a wide variety of plants, structures such as roots, stems, and leaves are explored in detail. Real-life applications illustrate how these plant structures are useful sources of food, building materials and medicine. The video highlights how plant structures play important roles in plant survival. Terminology and concepts conveyed in the video include roots, stems, xylem, phloem, leaf, stomata, guard cells, growth, photosynthesis and respiration.

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Plants

National Geographic Geokit

Authorized Teaching Resource

© 1999

LRC Order No.: **467937** **Est. Price:** **$399.80**

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This resource allows students to explore the diverse world of plants, from everyday foods to forgotten crops. Through hands-on activities, vivid transparencies, and engaging videos, the resource teaches how plants work, what they need to survive and how they obtain these requirements, how they help us breathe, and how they grow and reproduce. The videos include a presentation on the delicate relationship between plant and pollinator, a visit to a garden specifically designed to attract butterflies, and a trip to a rainforest to see what global threats mean on a personal level. Maps, articles and Internet activities enable further exploration of various topics, including the many uses of herbs, the economic importance of corn throughout history, and the dangers now facing plants around the globe. The kit also includes a set of student handouts, assessment options, and a teacher's guide.

LRC Order No.: 563230 Est. Price: $46.30

Plants / Forests

Bill Nye the Science Guy

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This video has Bill Nye go out on a limb describing the features of a forest ecosystem. The forest is subdivided into subfloor, floor, under-story and canopy, and each is then analyzed in terms of characteristics and organism living there. In his amusing way, Bill Nye discusses forest litter and its formation, decomposers, energy and nutrient flow, water flow through trees, and food sources for forest dwellers. Creative use of animations and visuals provide an added dimension to the narrative. A stump of a very old Redwood is used to show growth rings and to discuss age of trees. The valuable role trees play in reducing the greenhouse effect and the concerns associated with forest destruction are addressed. Bill discusses the diverse uses of wood and visits a variety of forests in North America to demonstrate some distinct differences in features. A researcher discusses her work in a forest canopy, considered the last biotic frontier, and forest fires are featured to point out their role in nutrient recycling. A Bill Nye video would not be complete without a song about forests.

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LRC Order No.: 510984 Est. Price: $108.95

Plants: What it Means to Be Green (Macintosh / Windows Version 3.0)

NGS PictureShow

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This CD-ROM provides two 12-minute narrated picture sequences that describe the structure and function of green plants. "Roots, Stems and Leaves" describes plant photosynthesis, showing, in simplified form, how water and carbon dioxide are broken down into elements that are then recombined to form glucose. This sequence also shows how root, stem and leaf structures each play a role in food manufacture. "X-treme Survival" explores adaptations in flower structure and seed production. The CD-ROM also includes brief sections of Student Information, Classroom Activities, and Assessment Questions.

Note:

• The limited scope of these additional sections and technical limitations in navigating the CD-ROM are weaknesses in this otherwise useful resource.

Plate Tectonics: Earthquakes, Volcanoes and Mountains (Video and Guide)

482191 **$69.50**

Earth Science

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video describes the composition of the earth's interior; differences between continental crust and oceanic crust; and various plate motions and how these affect earthquakes, volcanoes and mountains. The video uses a graphic model and animation sequences to explain and illustrate concepts and topics, including the formation of Surtsey Island in the Atlantic and the formation of row volcanoes and row islands along converging plates. Dramatic footage of volcanic eruptions is also included. The movement of plates along the San Andreas Fault is analyzed to account for past earthquakes and to make projections of land positions in the future. A formal style of presentation is used, with emphasis on scientific facts and detail.

LRC Order No.: 510992 Est. Price: $399.80

Pollution

National Geographic Geokit

Authorized Teaching Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

Pollution is a growing threat to the environment and the earth's life support system. *Geo-Kit Pollution* explores the scientific basis and social causes of this global problem. Contamination of the air, water, and soil are all investigated and analyzed, showing sources of pollution, the effects, and what has been done to alleviate the impact. The resource shows that we are all part of the environmental solution through recycling, conservation, and wise use of resources. The kit consists of three videos, a teacher's guide, articles on "Pollution in the Everglades and Europe" and "Recycling," as well as maps and posters.

The Prairies

Water Under Fire

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 20624 03

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

The use of water for a variety of human activities has impacted water quality and has altered the environment. Part one of this two part video analyzes the effects of water usage by the tar sand operations in northeastern Alberta, and takes a critical look at the impact of the Bennett Dam on the delta region of Lake Athabasca. Also assessed is the impact of chemical contaminants released into the surface water by the mining industry in the Northwest Territories and the melting of the permafrost due to global warming. Part 2 of this resource explores the effects of human activities on the water in specific regions of eastern Canada. Effluent released by pulp mills into the St. John River and contamination of ground water by agricultural operations in Prince Edward Island are presented in some detail. Focus in given to agricultural practices in the Annapolis Valley of Nova Scotia which have had a significant effect on water quality and quantity of available water. Water purification systems of major centers such as Halifax are also looked at from the perspective of water quality degradation. This resource support the grade 7 Science Program, Unit A: Interactions and Ecosystems, Outcomes 1, 2, 3 and 4.

LRC Order No.: Est. Price:

Properties of Matter — 480905 — $75.35

Physical Science in Action

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓			✓									

This resource explores the physical properties of matter through the format of a young student on a field trip presenting what she has learned. The video first explains the concepts of matter and the atom. Once this foundation is established, the resource investigates phases of matter (explained in terms of atomic arrangement and movement of particles) and how matter behaves in the natural world. Physical properties of matter—such as mass, weight, volume and density—are presented. Common applications of density differences, such as hot air balloons, are identified. Important concepts and terms are defined and described through graphics and interpretive animations. Demonstrations are also used to illustrate concepts: for example, how density causes one liquid to float on another and how this can reverse with temperature change.

Rocks and Minerals: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) — 470500 — $90.40

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This teacher resource consists of 40 transparencies showing the diversity of rock and mineral forms found on Earth's surface. Close-up photographs of rock and mineral specimens are complemented by macro views of rock formations and artwork that shows how rocks form. Two transparencies are included on rocks from space, and several show the mining and use of minerals. A 12-page teacher's guide provides a background paragraph for each transparency and briefly outlines six mini-lessons based on use of the transparencies.

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LRC Order No.: 539231 Est. Price: $191.20

Rocks and the Rock Cycle

Rocks and Minerals Series

Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video introduces the three types of rocks—igneous, metamorphic and sedimentary—and explains how each type is formed. The rock cycle is illustrated in detail using clear and easy to understand animations. Examples of the different types of rock are introduced and the characteristics of different rocks are compared. Concepts developed include the rock cycle, igneous, metamorphic, sedimentary, texture, and mineral composition.

Rocks and Soil

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855244

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

With rock in hand, Bill Nye ventures into the rocky world of soil formation. He sets off to explore the rock cycle and the differences between igneous, sedimentary and metamorphic rocks. He looks at how rocks are always changing, and how forces of weathering and erosion contribute to soil formation. A soil scientist talks about his work and tools of his trade. Bill takes a tour through a soil laboratory featuring a number of soil profiles. Once again, in his venturing style, he unearths fossils, looks at the use of quartz in watches, explores the qualities of coal and diamond and investigates crystals in rocks. In Bill Nye fashion, a song created to go with the theme is included and the video is brought to you by "Soil Bars." This resource supports the grade 7 Science Program, Unit E: Planet Earth, Outcomes 1, 2, 3 & 4.

© Alberta Education, Alberta, Canada

	LRC Order No.:	Est. Price:
• **ScienceFocus 7 (Student Text)**	**449703**	**$76.20**
• **ScienceFocus 7: Teacher's Resource Binder** (with Blackline Masters on CD-ROM) (Macintosh / Windows Version)	**449711**	**$268.30**
• **ScienceFocus 7: Illustrations CD-ROM** (Macintosh / Windows Version)	**451857**	**$197.10**
• **ScienceFocus 7: Teacher's Productivity Package** (Macintosh / Windows Version)	**508418**	**$157.70**

ScienceFocus 7: Science • Technology • Society

Basic / Authorized Teaching Resource

© 2001 **Author(s):** Gue, D. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓										

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 7 Science. Together these resources provide a very extensive set of learning activities, and background readings for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes preview and review sections with each chapter, a science skills guide and a glossary of key terms. The teacher resource includes general sections on science safety, student assessment, course materials, and blackline masters, as well as detailed unit guides including an introduction, teacher background and instructional suggestions.

The Scientific Method

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2065501

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					

This resource presents nine steps in developing a theory using scientific method, and defines and explains different types of variables. Three individual investigations are used to show the scientific method in practice and highlight the individual steps. Pacing, examples and graphics are appropriate for a junior high audience. This resource could be used at the beginning of each unit of study to reintroduce students to the scientific method.

LRC Order No.: 467995 Est. Price: $57.90

Sea Otters

Champions of the Wild

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video presents a historical look at the sea otter, from its near-extinction due to over-hunting at the turn of the 20th century to its amazing return today through both natural processes and translocation programs to re-introduce the species to various sites of their natural habitat. The resource shows the effects of losing a valuable member of an ecosystem, and explains how re-introduction can bring the ecosystem back to normal.

539223 $191.20

Sedimentary Rocks

Rocks and Minerals Series

Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

Sedimentary rocks show the work of ongoing geological processes and provide clues to the geologic history of Earth. This program shows how sedimentary rocks are formed and introduces features of sedimentary rocks that we can use in describing them and interpreting their formation. This video also investigates the relationship between sedimentary rocks and fossil formation. Concepts developed in this video include sediments, ripple marks, concretions, geodes, compaction, cementation, precipitates, evaporates, petrification, trace fossils, index fossils, unconformity, fault, extrusion.

LRC Order No.: 467820 Est. Price: $56.80

The Skeletal System (2nd Ed. Revised)

Human Body

Support Resource

© 1993

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓											

This video presents a general description of the human skeletal system and how it functions. Detailed animation and X-ray motion pictures trace the structure of the skeleton from head to foot, examining the bones in each region of the body and their contribution to the body as a whole. Additional animation and scenes of sports activities demonstrate the workings of different kinds of joints and their individual strengths and weaknesses.

468000 $57.90

St. Lawrence River Belugas

Champions of the Wild

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This video presents a history of beluga whales and how they interact with their environment in the St. Lawrence Seaway. The video traces the beluga from the turn of the century, when belugas were blamed for declining cod stocks, to the present day, when they are on the comeback from extinction. The video also discusses how toxins from nearby industries have impacted the beluga population, and how the increasing number of belugas suggests that clean-up efforts are working.

© Alberta Education, Alberta, Canada

LRC Order No.: 482175 Est. Price: $69.50

Succession

Support Resource

© 1994

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This resource presents biological succession as it occurs on a Lake Erie sand spit. The resource tells the story of the spit, beginning with the formation of the spit and an explanation of the forces that help shape it over time. The biological succession that follows starts with pioneer plants, including the russian thistle and seaside spurge, which stabilize the shifting sand and gradually make conditions suitable for a host of other plants and associated animals. The appearance of the cottonwood marks the beginning of another stage in the process, which ultimately leads to the climax community of cherry, oak, maple and hemlock trees. The resource combines a traditional narration style with extensive photography of the spit, as well as some animation sequences.

	LRC Order No.:	Est. Price:
• **The History of the Earth: Over the Eons**	**606543**	**$156.45**
• **The Geology of the Earth: Of Forces, Rocks, and Time**	**606569**	**$156.45**

Survey of Science Series: Earth Science Essentials

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

• The History of the Earth: Over the Eons: Go back 4.5 billion years and look through the earth's geologic time scale. See the major geological changes that occurred around the world and the forces driving them. Look at the shaping and reshaping of the North American continent once Pangea drifted apart into separate land masses. Follow the evolutionary development of major life forms from blue-green algae to the primates and the significant factors that drove natural selection. Theories are postulated to explain the disappearance of the dinosaurs. This informative video has plenty of detail and provides a comprehensive history of life and geology on this planet. This resource supports the grade 7 Science Program, Unit E: Planet Earth, Outcomes 1, 3 & 4.

• The Geology of the Earth: Of Forces, Rocks, and Time: Explore the forces that shape the earth and see spectacular geological formations designed by their action. A brief account of the earth's formation sets the stage for movement of crustal plates, volcanic activity and hot geysers. The three major groups of rocks—igneous, sedimentary, and metamorphic—and their place in the rock cycle are detailed. The action of weathering and erosional agents is described and supported by excellent visual examples. This video has a traditional delivery style of science-based content and, at times, extensive detail. This resource supports the grade 7 Science Program, Unit E: Planet Earth, Outcomes 1, 2 & 3.

LRC Order No.: 606519 Est. Price: $115.90

Sylva Boralis: From Snow and Fire

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This fascinating documentary explores one of the great biomes of our planet, the boreal forest. It presents the cycle of natural events within the forest. The adaptations and daily life of moose, beaver, and other animals are presented as they struggle to survive. A variety of other resident and migratory inhabitants are introduced as they appear in this biome throughout the year. The world of the beaver pond and the marsh are explored to show the interrelationships of birds, fish, frogs, and insects. The process of photosynthesis is described in general terms to explain the flow of energy. The effects on both the forest and its inhabitants of natural disturbances such as fire, windstorms, and insect epidemics are analyzed. This video make for a great springboard to ecological concepts covered in Unit A in grade seven.

510942 $57.30

Symbiosis: Nature's Delicate Balance

Support Resource

© 1995

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

Go on a quick tour of the world to see how human activity has imposed changes on the environment. Such changes have occurred throughout human history, many with long lasting effects still visible today. This video explores our relationship with the environment and how environmental changes produced by our interaction often have negative effects. The analysis leads the viewer to realize that we must change our ways to provide for better management of soils, toxic wastes and forests.

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LRC Order No.: 607757 Est. Price: $69.50

Temperate Deciduous Forests (Video with Guide)

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

Go on tour through a temperate deciduous forest biome in the state of New England. This video explores the biome's environmental needs and conditions and compares them to the taiga, grassland and tropical deciduous biomes. Important concepts such as interdependence, photosynthesis, and succession are described, accompanied by illustrations and video footage. The recycling of soil nutrients brings in the ecological function of decomposers and shows decomposers in action. These forests are classified according to their dominant species of trees as they extend southward along the eastern seaboard. The video discusses seasonal changes, animal and plant life, and adaptations that allow these organisms to survive. A historical account of this biome looks at glaciation, early settlers, and subsequent influence of human activity. The introduction of diseases such as Dutch Elm Disease, global warming, and human population growth are all considered in what the future may hold for this biome. This resource supports the grade 7 Science Program, Unit A: Interactions And Ecosystems, Outcomes 1, 2, 3 & 4.

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LRC Order No.: 468034 Est. Price: $57.90

Turning Down the Heat: The New Energy Revolution

Support Resource

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓												

This video looks at the global impact of the burning of fossil fuels, providing concrete examples of the dangers of global warming. Examples of various renewable resource energy projects are profiled as economically viable solutions to these problems. Each section of the resource deals with a different power source, citing examples of the ways that various countries utilize it. Examples include solar energy projects in Holland, Japan, and California; biogas energy in Denmark and Vietnam; wind energy in Holland and India; and hydrogen fuel cells and ground source heat in Vancouver. The resource uses grade-appropriate vocabulary, and focuses on the economics of energy use and production in addition to environmental factors.

Note:

- Some portions of the video may be interpreted as portraying the Canadian government as being strongly pro-oil.

Understanding Earthquakes

Science Screen Report for Kids

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2069503

© 2002

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This 15-minute video presents earthquakes as tangible evidence for, and a consequence of, plate tectonics. Consideration of the San Andreas Fault and the major earthquakes along it's length answer three major questions: How are earthquakes generated? How are they measured? What can earthquakes tell us about the composition of the Earth? Seismological evidence and satellite positioning data are presented to substantiate movement of crustal plates. Earthquake magnitude, foci and epicentres are explained using simple graphic models. The dangers of earthquakes and the engineering challenge facing people in areas such as Los Angeles and San Francisco highlight the importance of the science associated with earthquakes. The video concludes by focusing on the important goal of accurate earthquake prediction and what its attainment would mean to world societies.

LRC Order No.: Est. Price:
Out-of-print

Volcano

Eyewitness

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video, part of a series based on the EYEWITNESS books, provides students with live action photography and video footage of volcanoes and earthquakes. The program explains how and why volcanoes are formed, their destructive effects, and their role in creating new rocks and land. Students will learn how volcanoes and earthquakes are measured, the myths surrounding them, and how they have affected human life throughout history. The process of making the film and the use of special effects are presented at the end of the program. The video would be best used as an introduction, extension or summary.

Volcanoes

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855268

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

Volcanoes are fascinating to study although they can be violent and destructive in nature. In this video Bill Nye explores the hot world of volcanoes, featuring an interactive question-and-answer format and hands-on activities. He defines volcanoes, explains how they form and explores the different types that exist. He describes how plate tectonics contributes to volcano formation, why they erupt, how volcanoes form islands and shape the earth's surface. The program includes a teacher's guide filled with suggestions for extension activities and classroom experiments.

LRC Order No.: 482183 Est. Price: $69.50

Water Erosion and Landforms (Video and Guide)

Earth Science

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This video looks at water as the most powerful erosional force on Earth. The video begins with a distinction between weathering and erosion, leads into an animated description of the water cycle, then examines the erosion processes associated with glaciers, streams and rivers, and waterfalls. It presents some interesting visual examples of land forms shaped by water action and, with the use of effective animations, provides an interpretive explanation of their formation. The formation of V-shaped valleys of young rivers is explained, as is the formation of meanders and oxbow lakes connected with more mature streams. Some attention is given to sediment, floods, flood plains, as well as various means of controlling flooding. A summary of the major points and a final note about the constant evolution of land forms complete the video.

Wetland Explorer (Windows/Macintosh Version 1.0 CD-ROM with Education Resources) **538465** **$311.85**

Authorized Teaching Resource

© 2002

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

Go on a field trip to a prairie wetland and get a close-up view of its inhabitants. Pack your backpack and go exploring six wetlands presented as scrollable panoramic photographs. Wetland Explorer is a highly interactive multimedia CD-ROM that deals with the ecology of wetlands in the prairie pothole region of North America, including Alberta. Students select tools analogous to things carried by naturalists to explore wetland images: binoculars, camera, dip net, rubber boots, guidebook, etc. Every click of a tool gives information about flora and fauna or the ecosystem itself. High quality photographs and sound effects are used, with additional information provided in a guidebook that includes movie narrations. Students can take pictures and paste them into a personal journal where they can also type their own notes. These pages can be printed as a report on their activities and what they have learned. A Teacher guide with classroom worksheets is included.

LRC Order No.: Est. Price:

Wetlands

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855257

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

A variety of wetland ecosystems are examined, as Bill Nye the Science Guy takes viewers on a wetland journey and explains the importance of wetlands to humans and global ecosystems. Using models, Bill shows how wetlands—including marshes, streams, shorelines, and estuaries—help store water and filter water, thus helping to prevent floods and improve water quality. The importance of wetland conservation is stressed. Most examples are generic and some are recognizably based on the USA.

Supports Science topic 5E Wetland Ecosystems, Unit 7A: *Interactions and Ecosystems,* and Unit 8E Freshwater and Saltwater Ecosystems

Wetlands: Cradles of Life

563256 $56.80

Support Resource

© 1995

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

The biodiversity of wetlands and the important role these ecosystems play in the natural world is presented. This information supports the underlying premise of wetland conservation and wise management of these ecosystems. The variety of wetlands in North America is briefly explored with marshes given primary attention. A number of species of plants and animals are identified in a bog by the use of visual clips. Major reasons for wetland loss in both urban and rural areas are presented, along with reasons why these ecosystems should be preserved. It explores conservation initiatives that have worked and the benefits of these to the wetland organisms and humans that live in the area.

LRC Order No.: 467838 Est. Price: $81.10

What Are Glaciers?

Earth, the Environment and Beyond

Support Resource

© 1992

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This video introduces what a glacier is and how it forms, describes how and where glaciers move, and presents the history of glaciers. It also describes the effects of glacial erosion and the landform it creates.

What Are Volcanoes?

LRC Order No.: 467812 Est. Price: $81.10

Earth, the Environment and Beyond

Support Resource

© 1992

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓										

This video provides a thorough explanation of volcanoes and volcanic action. It explores the origins of volcanoes, describes different types of volcanoes, and explains eruption processes. It also shows the location of volcanoes along the tectonic plates.

Note:

- Distances are given in miles rather than kilometers.

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LRC Order No.: 511966 Est. Price: $28.95

Why Wetlands? Education Kit

Authorized Teaching Resource

© 1994

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓														

This resource lets students take a close look at what makes up a wetland ecosystem, discover the kinds of wetlands that exist, and understand why we should protect them. The kit provides extensive information about ecosystems, with a focus on the four wetland types in Ontario: marshes, swamps, bogs and fens. The resource explains the importance of these areas as vital habitats to hundreds of plant and animal species, some of which are endangered, as well as their role in maintaining water quality and water storage. It also explores why nearly 85% of wetland areas no longer exist, and what can be done to preserve what is left. The kit consists of 20 lessons and classroom-ready activities with student handouts. Also included are fact sheets on species at risk, "Life in an Ontario Wetland" and other posters, games and resource listings.

The World of Plants

478299 $191.20

Plant World

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
	✓													

This video explores the great diversity of the plant world in order to answer the basic question "What makes a plant a plant?" The video describes the early history and origins of plants, and highlights the defining characteristics of nonvascular and vascular plants. Bryophytes, spore-producing plants, gymnosperms, and angiosperms are illustrated and explained using vivid images and colourful animation. The terminology and concepts discussed include algae, angiosperms, gymnosperms, bryophytes, cell wall, chlorophyll, photosynthesis, vascular and nonvascular.

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Science

Grade 8

November 2005

GRADE 8
Units A, B, C, D, E

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Basic Learning Resources				
Addison Wesley Science in Action 8 Series				
Addison Wesley Science in Action 8 (Student Text)	2001	**Basic** 8A / 8B / 8C / 8D / 8E	449670	$73.45 LRC
Addison Wesley Science in Action 8: Teacher's Resource Package	2001	Authorized Teaching 8A / 8B / 8C / 8D / 8E	449696	$260.60 LRC
ScienceFocus 8 Series				
ScienceFocus 8: Science • Technology • Society (Student Text)	2001	**Basic** 8A / 8B / 8C / 8D / 8E	449729	$76.20 LRC
ScienceFocus 8: Science • Technology • Society: Teacher's Resource Binder (with Blackline Masters on CD-ROM) (Windows/Macintosh)	2001	Authorized Teaching 8A / 8B / 8C / 8D / 8E	449737	$268.30 LRC
ScienceFocus 8: Science • Technology • Society: Teacher's Productivity Package (Macintosh / Windows Version 4.0) (includes Teacher's Resource; Blackline Masters; Illustrations)	2001	Authorized Teaching 8A, 8B, 8C, 8D, 8E	508400	$156.95 LRC
ScienceFocus 8: Science • Technology • Society: Illustrations CD-ROM (Macintosh / Windows Version 4.0)	2001	Authorized Teaching 8A, 8B, 8C, 8D, 8E	451881	$197.10 LRC

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GRADE 8
Unit A - Mix and Flow of Matter

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Mixtures and Solutions (Video; Teacher's Guide; Pre-Test; Post-Test) *Physical Science Series*	1998	Support 8A (Marlin Motion Pictures Ltd.)		Vendor Direct
Properties of Matter *Physical Science in Action Series*	2000	Support 7C / 8A	480905	$75.35 LRC
NEW Properties of Matter: Student Guide and Source Book *Science and Technology for Middle Schools Series*	2000	Support 8A	536873	$23.90 LRC
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
NEW Fluids (Student Book) *Science & Technology Activities Resource Series Series*	2000	Authorized Teaching 8A	607921	$9.80 LRC
NEW Fluids: Teacher's Guide *Science & Technology Activities Resource Series Series*	2000	Authorized Teaching 8A	607939	$23.20 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC
NEW Properties of Matter: Teacher's Guide *Science and Technology for Middle Schools Series*	2001	Authorized Teaching 8A	536881	$202.80 LRC
Solutions	1990	Authorized Teaching 8A	414780	$24.35 LRC

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GRADE 8
Unit B - Cells and Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW Bones and Muscles / Respiration *Bill Nye the Science Guy Series*	1998	Support 8B	BPN 855228 / 855240	ACCESS–The Education Station
The Cell *Microorganisms Series*	2001	Support 8B	480038	$191.20 LRC
Cell Processes *Microorganisms Series*	2001	Support 8B	480046	$191.20 LRC
Cells: The Building Blocks of Life *Survey of Science: Biology Essentials Series*	1996	Support 8B	BPN 2065601	ACCESS–The Education Station
Cells and Tissues *Science Key Concepts: Biology Series*	1998	Support 8B	478273	$69.50 LRC
NEW Digestion / Blood Circulation *Bill Nye the Science Guy Series*	1998	Support 8B	BPN 855207 / 855223	ACCESS–The Education Station
NEW Heart *Bill Nye the Science Guy Series*	1998	Support 8B	BPN 855266	ACCESS–The Education Station
Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0) *NGS PictureShow Series*	1998	Support 7D / 8B	467979	$82.80 LRC
Human Body 2: Picture Show CD-ROM (Macintosh / Windows Version 4.0) *NGS PictureShow Series*	1998	Support 8B	467987	$82.80 LRC
NEW The Human Body: The Ultimate Machine *Survey of Science Series: Biology Essentials Series*	1996	Support 8B	BPN 2063601	ACCESS–The Education Station
Introducing the Cell	1995	Support 8B	510934	$104.05 LRC
Microscopic Life Forms *Animal Life and Beyond Series*	1998	Support 8B	479049	$56.80 LRC
Respiration *Our Human Body Series*		Support 8B	479221	$56.80 LRC
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 7D / 8B	467953	$90.40 LRC

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GRADE 8 (continued)
Unit B - Cells and Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Human Body 2: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 8B	467961	$68.70 LRC
Human Body I: Circulatory, Respiratory, Digestive, and Immune Systems *National Geographic Geokit Series*	1997	Authorized Teaching 8B	467945	$399.80 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC
The World of Living Things (with Teacher's Guide) *Biology: The Science of Life Series*	2001	Authorized Teaching 8B	513368	$69.50 LRC

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GRADE 8
Unit C - Light and Optical Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW Eyeball *Bill Nye the Science Guy Series*	1998	Support 8C	BPN 855220	ACCESS–The Education Station /
NEW Light Optics *Bill Nye the Science Guy Series*	1998	Support 8C	BPN 855227	ACCESS–The Education Station /
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
Waves (Video and Guide) *Science Key Concepts: Physics Series*	1998	Support 8C	482208	$69.50 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Light and Optics: from Lenses to Polarisation: Containing over 16 Fully Interactive Simulations (Windows Version) *Physics Simulation Series*	2001	Authorized Teaching 8C		LRC
		Light and Optics (Single User)	469818	$86.90
		Light and Optics (5-User Labpack)	469826	$196.35
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC

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GRADE 8
Unit D - Mechanical Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Energy Machines and Motion: Student Guide and Source Book *Science and Technology Concepts for Middle Schools Series*	2000	Support 8D / 9D	522335	$178.55 LRC
NEW Energy and Work *Simple Machines At Work: A Caveman's Perspective Series*	1998	Support 8D	BPN 2008601	ACCESS–The Education Station
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
NEW Simple Machines *Bill Nye the Science Guy Series*	1998	Support 8D	BPN 855210	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Energy Machines and Motion: Teacher's Guide *Science and Technology Concepts for Middle Schools Series*	2000	Authorized Teaching 8D / 9D	522343	$173.85 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC
Simple Machines (Videocassette with Teacher's Guide) *Motion, Energy and Force Series*	2000	Authorized Teaching 8D	485492	$191.20 LRC

GRADE 8
Unit E - Freshwater and Saltwater Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Erosion *Bill Nye the Science Guy Series*	1998	Support 8E	BPN 855286	ACCESS–The Education Station
NEW Food Web / Ocean Life *Bill Nye the Science Guy Series*	1998	Support 7A (Food Web) / 7A (Ocean Life) / 8E (Ocean Life)	563248	$46.30 LRC
Lakes & Ponds *Bill Nye the Science Guy Series*	1998	Support 8E	BPN 855289	ACCESS–The Education Station
Marine Life *Animal Life and Beyond Series*	1998	Support 7A / 8E	479031	$56.80 LRC
NEW Oceanography *Bill Nye the Science Guy Series*	1998	Support 8E	BPN 855229	ACCESS–The Education Station
Oceans: Charting the Vastness *Survey of Science: Earth Science Essentials Series*	1996	Support 8E	510950	$114.75 LRC
Pond & River *Eyewitness Series*	1996	Support 8E	467804	$10.80 LRC
NEW The Prairies *Water Under Fire Series*		Support 8E	BPN 2062403	ACCESS–The Education Station
The Scientific Method	2000	Support 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E	BPN 2065501	ACCESS–The Education Station
NEW Water Cycle *Bill Nye the Science Guy Series*	1998	Support 8E	606577	$46.30 LRC
Water Erosion and Landforms (Video and Guide) *Earth Science Series*	1998	Support 7E / 8E	482183	$69.50 LRC
NEW Wetlands *Bill Nye the Science Guy Series*	1998	Support 5E / 7A / 8E	BPN 855257	ACCESS–The Education Station
Wetlands Ecosystems II: Interactions and Ecosystems: Student Journal: Middle School Science Grades 7 to 8	1999	Support 8E	415481	$6.80 LRC
What Are Glaciers? *Earth, the Environment and Beyond Series*	1992	Support 7E / 8E	467838	$56.80 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 7E / 8E	470493	$90.40 LRC

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GRADE 8 (continued)
Unit E - Freshwater and Saltwater Systems

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Geology Explorer (Windows / Macintosh Version) *Earthstation Library Series*	2000	Authorized Teaching 7C / 7E / 8E	523028	$114.75 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC
Oceans *National Geographic Geokit Series*	1999	Authorized Teaching 8E	470518	$399.80 LRC
Oceans - Climate Explorer (Windows / Macintosh Version) *Earthstation Library Series*	2000	Authorized Teaching 7A / 8E	472134	$114.75 LRC
Wetlands Ecosystems II: Interactions and Ecosystems: Educator's Guide: Middle School Science Grades 7 to 8	1999	Authorized Teaching 8E	415499	$6.80 LRC

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Grade 8: Annotated Bibliography (alphabetical listing)

	LRC Order No.:	Est. Price:
• **Addison Wesley Science in Action 8 (Student Text)**	**449670**	**$73.45**
• **Addison Wesley Science in Action 8: Teacher's Resource Package**	**449696**	**$260.60**

Addison Wesley Science in Action 8

Basic / Authorized Teaching Resource

© 2001 **Author(s):** Booth, C. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓	✓	✓	✓	✓					

This student book and teacher's resource binder provide direct support for the Alberta program of studies for Grade 8 Science. Together these resources provide an extensive set of learning activities and planning tools for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes an introductory outline and summary review section with each chapter, a science toolbox for skill development and a glossary of key terms. The teacher resource includes general sections on skill development, student assessment, and lists of required materials and equipment. Detailed sections in each unit include an overview, instructional suggestions, and several sets of blackline masters targeting a range of instructional and assessment needs.

Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition) **434803** **$11.80**

Authorized Teaching Resource

© 2000 **Author(s):** Agban, J. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

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LRC Order No.: Est. Price:

Bones and Muscles / Respiration

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855228 / 855240

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

The Respiration segment of this video supports unit 8B: Cells and Systems. Bill provides us with an "inspired" look at why we need oxygen. Using simple effects like balloon lung/diaphram models, students learn the mechanics of breathing. Other concepts include how to test lung capacity, alveoli and surface area, cellular respiration, mucous, and gills. This humerous, musical piece is very engaging.

The Cell

480038 $191.20

Microorganisms

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video takes students on a journey through the microscopic world of the cell. The video explains that all living things are composed of cells, and highlights the difference between animal cells and plant cells. The video emphasizes the importance of cells in our daily lives, using real-life examples and applications. Students learn about the discovery of cells and the development of cell theory. Through colourful and engaging animations, the different parts of a cell are explained. Some of the terminology and concepts covered in this video include cell theory, organelles, cell wall, cell membrane, cytoplasm, mitochondria, ribosomes, nucleus, chromosomes, lysosomes, tissues, organ, and the differences between prokaryotic and eukaryotic cells.

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LRC Order No.: 480046 Est. Price: $191.20

Cell Processes

Microorganisms

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

In this program, students explore some of the important cell processes necessary for life. Vivid animation is used to clearly explain the process of cell growth and cell division. Using everyday examples, the video discusses how cells carry out the processes of diffusion, respiration, and osmosis. The different ways cells obtain, use and release energy are outlined. Terms and concepts covered in this video include: metabolism, respiration, diffusion, osmosis, chromatin, active transport, passive transport, mitosis, meiosis, asexual and sexual reproduction, and fermentation.

Cells: The Building Blocks of Life

Survey of Science: Biology Essentials

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2065601

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video uses a series of short, concise segments to present the following concepts: the cell as the basic unit of life; single and multicellular organisms; specialization of cells; prokaryotic versus eukaryotic cells; and cellular structures (nucleus, organelles, nuclear membrane, cytoplasm, mitochondria, ER, ribosomes, golgi bodies, chloroplasts, cell membrane and cell walls) at a very basic level. The processes of diffusion, osmosis, and active transport are also described. The video addresses the use of cellular research in the area of cryobiology, and the medical advancements which have resulted. It also gives supplemental information on photosynthesis, cellular respiration, and enzyme/co-enzyme function. This resource covers a great breadth of concepts without going into too much detail. The computer generated graphics are visually appealing and assist student learning.

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LRC Order No.: 478273 Est. Price: $69.50

Cells and Tissues

Science Key Concepts: Biology

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video consists of three major sections: "Animal Cells" (structures and tissue), "Plant Cells" (structures and tissue), and "Cell Division" (mitosis and meiosis). Each concept is illustrated by a variety of experiments that are too difficult or dangerous to be conducted in a school lab, as well as by live photography, microscopic photography of living cells, and computer animation. The video covers the differences between animal and plant cells, basic cellular components, and the definition of tissue (with specific examples from both plants and animals provided). There is a clear emphasis on the relationship between the function of a cell and its structure. The concepts of mitosis, meiosis, chromosomes, DNA, nucleic acids, and their relationships to sexual reproduction are clearly illustrated. The teacher's guide includes background information and suggestions for pre-viewing and extension activities. This resource would be an effective way to replace the in-class study of human cheek and blood cells.

Note:

• This video creates opportunity for discussion of why it is not appropriate to carry out hands-on studies of live human cells in the science classroom.

LRC Order No.: Est. Price:

Digestion / Blood Circulation

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855207 / 855223

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

Take a Bill Nye tour of two of the human body systems: digestion and blood circulation. Using the analogy of a steam engine that runs on cornflakes, he explains how the body's digestive system is like a fine-tuned mechanism that processes food into energy. He shows how we digest food and take up the nutrients. To demonstrate the action of acid Bill shows the effects of carbon dioxide and cola on four different objects in one activity and how a chemical reaction of salt and vinegar will clean dirty pennies in another.

In his dynamic style, he discusses blood flow through the body and becomes a real heart-throb when he describes the action of the heart. He shows white and red blood cells and how red blood cells are formed. "You've Got the Beat" and "Thump, Thump" are two activities he demonstrates to observe the effects of heart pumping with vein action and how to make a stethoscope. Bill also shows viewers how to observe the effects of pressure on arteries and veins and identifies the sections and parts of a beef bone that contribute to red blood cell production.

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LRC Order No.: 470493 Est. Price: $90.40

Dynamic Earth: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This teacher resource provides a set of 40 transparencies that show evidence of the dynamic Earth, including illustrations of folding, faulting, volcanoes, plate movements, mountain formation, glaciation, erosion and deposition. The illustrations consist mainly of photographs, but artwork depicting and explaining crustal movements is also included. A teacher's guide provides a paragraph of background information on each transparency and briefly outlines six mini-lessons that are based on use of the transparencies.

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LRC Order No.:	Est. Price:
522335	$58.45
522343	$173.85

- **Energy Machines and Motion: Student Guide and Source Book**
- **Energy Machines and Motion: Teacher's Guide**

Science and Technology Concepts for Middle Schools

Support / Authorized Teaching Resource

© 2000 **Author(s):** Hanson, C. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
								✓					✓	

This activity-based resource teaches students about electrical energy, simple machines, and moving vehicles. The resource includes interesting details connected with these topics, as well as historical information on the scientific contributions made by well-known scientists such as Galileo, Volta, Davies, Edison, Newton and Watt. The concepts of force, work and power are presented, along with sample calculations. Mechanical advantage and efficiency of simple machines are also covered. The student guide includes background information, reading selections, safety tips, and step-by-step instructions to guide students through their classroom inquiries.

The guide supports teachers in using *Energy, Machines and Motion* in the classroom. The guide provides background material on science and pedagogy, guidance on the preparation and setup of kit materials, and detailed instructions for facilitating classroom science investigations. It also includes blackline masters, and assessment strategies, tools and scoring rubrics.

Note:

- Safety considerations will be an important factor in deciding which of the activities are suitable for independent and teacher-guided study.

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LRC Order No.: Est. Price:

Energy and Work

Simple Machines At Work: A Caveman's Perspective

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2008601

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
								✓						

Develops and explains work, power and energy, with definitions and calculations as well as conservation of energy, energy forms and conversion, mechanical advantage. Develops and explains content; formulas and definitions with graphics and applications. Developmental is well-paced, simplistic and basic.

Comments:

- Non-metric references along with metric.
- A bit dry yet educational.
- May need to clarify that energy conversion devices are not ideal and energy may be "lost" to the environment. Energy conversion is not 100%

Erosion

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855286

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

In this video, Bill Nye explains how wind, water and other agents of erosion help shape the earth's surface, emphasizing that erosion is a long and continuing process. Erosive processes are examined in the field, and then further explored through laboratory demonstrations of freeze-thaw action and chemical erosion. As he takes viewers on a tour of different landscapes, Nye points out evidence of erosion found in mountain, desert and coastal land forms.

Note:

- The video includes several rock music segments.

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LRC Order No.: Est. Price:

Eyeball

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855220

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
							✓							

Siskel and Ebert are on hand to give two thumbs up as Bill Nye the Science Guy focuses his attention on the body's window to the world – the eyeball. Bill interviews a seeing-eye dog trainer and a virtual reality designer and demonstrates how a 3-D movie works. The music video is a parody of "Two Princes" by the Spin Doctors.

- **Fluids (Student Book)** **607921 $9.80**
- **Fluids: Teacher's Guide** **607939 $23.20**

Science & Technology Activities Resource Series

Authorized Teaching Resource

© 2000 **Author(s):** Chiswell, L. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓									

The defining characteristic of fluids is their ability to flow but there is much more to fluids than that. This resource describes fluids through the exploration of their general properties and explains these properties in terms of the particle theory. By experimenting with and investigating the viscosity and density of different liquids students learn the ways in which these qualities affect objects placed in those liquids. This leads to Archimede's principle and its implications when measuring the buoyant forces on immersed or floating objects. As well, the resource discusses the diverse applications of the principles involved in fluid mechanics. Fluids, including air and water, are essential to many industrial processes and form the basis of hydraulic and pneumatic devices. The Teacher's Guide includes student learning objectives, background information to each topic and related activities, review questions for students, and additional black line masters for checking student understanding and learning as well as assessment rubrics.

LRC Order No.: 563248 Est. Price: $46.30

Food Web / Ocean Life

Bill Nye the Science Guy

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

• Food Web: Bill Nye explores food chains as they take him through a tangle of a food web and up a food pyramid. In his humorous eclectic style, he first describes the role of plants and how living things are interconnected. Throughout the video, primary focus is placed on humans and the plants and animals that make up their food. He builds some simple food chains from the animal and plant contents of a hamburger. Plants, as producers of food and oxygen are shown to play a valuable role is sustaining life on earth, as do decomposers. Photosynthesis is described and a simple experiment is demonstrated to show the importance of light to plants. The ecological importance of plants is demonstrated through the analysis of a pizza to show how everything in it originates from plants. The needs of plants are also briefly discussed through a look at hydroponics. The video finishes with a student field trip to a wetland ecosystem in Alabama which is in jeopardy of being destroyed by a proposed highway. This resource supports the grade 7 Science Program, Unit A, Outcomes 1, 2 & 4 and Unit B, Outcomes 1 & 2.

• Ocean Life: Bill Nye takes an ocean view of food chains and food webs. In his humorous unconventional style, he begins with the enormity of microscopic phytoplankton and zooplankton identifying some common forms and describing their niche in the ocean world. He also looks at krill in the South Seas and baleen whales that rely on them for food. He presents a number of plant species including sea grass and eel grass that form the basis of ocean food chains. The ecological role of ocean plants as producers of food and free oxygen is emphasized. A food web is constructed to show the linkage of food chains. Feeding strategies and associated adaptations are also explored, particularly those of the jellyfish and the baleen whales. The function of streams in replenishing ocean nutrients is briefly discussed. The video culminates with the notion that ocean ecosystems, like those on land, are in delicate balance, not to be tampered with if we are to maintain a healthy biosphere. This resource supports the grade 7 Science Program, Unit A, Outcomes 1 & 2 and Unit B, Outcomes 2. It also supports the grade 8 Science Program, Unit E: Freshwater And Saltwater Systems, Outcome 3.

LRC Order No.: 523028 Est. Price: $114.75

Geology Explorer (Windows / Macintosh Version)

Earthstation Library

Authorized Teaching Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓		✓					✓					

Geology Explorer is a multimedia study of planet Earth from core to crust. Lessons cover topics such as rocks and minerals, weathering and plate tectonics, all through the perspective of earth scientists. The resource contains approximately 600 MB of educational content, including hundreds of photographs, detailed captions and text, digital video, 3D animations, charts, music, sound effects, and narration. In addition, the CD-ROM includes interactive exercises and projects such as virtual experiments, demonstrations, mini-games and puzzles. Multiple choice tests, a sample lesson on plate tectonics, an extensive glossary and a connection to EOA Scientific Systems Inc.'s *Earth Station Internet Campus* are included. A teacher's manual and user's guide are also provided on the CD-ROM.

Heart

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855266

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

"Ya Gotta Have Heart," and heart-throb Bill Nye tells us why! He checks out this important muscular pump's function in the body, by pulling nine "Gs" with the U.S. Navy's Blue Angels, and chatting with Seattle Mariner, Edgar Martinez. The music video is an original composition, "Wonder Pump" by Aorta.

LRC Order No.: 467945 Est. Price: $399.80

Human Body I: Circulatory, Respiratory, Digestive, and Immune Systems

National Geographic Geokit

Authorized Teaching Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This comprehensive kit explores the human body, focusing on the circulatory, respiratory, digestive, and immune systems through a variety of learning activities. The kit allows students to examine the structures and functions of major organs such as the heart, lungs and stomach, and learn about the anatomy, physiology and functions of the immune system. Three videos provide in-depth information on "Circulatory and Respiratory Systems," "Digestive System," and "Our Immune System." The kit also includes maps, colour transparencies, student handouts, trivia cards, National Geographic magazine articles, and a teacher's guide. The teacher's guide provides an overview, background information, a glossary, assessment suggestions, and other resources. Each section of the guide incorporates a K,W,L (What I Know, What I Want to Know, What I Learned) strategy, along with a number of hands-on activities. Inquiry-based lab and Internet activities let students develop their understanding of scientific process. A review test with 35 short-answer questions is also included.

Note:

• Because of the quantity and depth of materials, teachers will have to choose only a selection of activities in order to finish the unit within a reasonable time.

LRC Order No.: 467953 Est. Price: $90.40

Human Body 1: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓			✓								

This resource is a visual library of images illustrating several human body systems. It explains the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. The kit includes 40 overhead transparencies and a teacher's guide with captions and activities.

Human Body 1: Picture Show CD-ROM (Macintosh / Windows Version 4.0) **467979** **$82.80**

NGS PictureShow

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
			✓			✓								

This CD-ROM consists of two self-contained shows that introduce the basic components and functions of the skeletal, muscular, nervous, and endocrine systems. In "Bones and Muscles," students can explore the skeletal framework that supports the body and the muscular system that allows the body to move and manipulate objects. In "Nervous and Endocrine Systems," they can discover the complex communication systems that link and control all the body functions and give us the ability to think and create. The resource also explains how these systems gather information through our senses, analyze the information, and then take action. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and a user's guide.

LRC Order No.: Est. Price:

Human Body 2: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) **467961** **$68.70**

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This PicturePack resource is a visual library of images illustrating how the body processes and uses energy. It explores the cells of the human body and how they function in the circulatory, digestive, and respiratory systems. The kit consists of 40 overhead transparencies and a teacher's guide with captions and activities.

Human Body 2: Picture Show CD-ROM (Macintosh / Windows Version 4.0) **467987** **$82.80**

NGS PictureShow

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This CD-ROM consists of two self-contained shows that introduce basic concepts related to the use and processing of energy by the human body. In "Cells and Circulation" students discover how our cells get a constant supply of food and oxygen through our circulatory system. They can find out why there is constant activity in all living cells and follow the flow of blood throughout the body to see how the heart is at the center of it all. In "Respiration and Digestion" students explore the things that the body does to nourish itself, learning how the respiratory system delivers oxygen to the blood and gets rid of carbon dioxide. This resource includes more than 100 images, music, narration and read-along text, a student guide, classroom activities and assessments sheets, and a user's guide.

LRC Order No.: Est. Price:

The Human Body: The Ultimate Machine

Survey of Science Series: Biology Essentials

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

© 1996

BPN 2063601

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

Take an exploratory tour of the human body through all the major organ systems. This video details the functioning of the muscular, circulatory, respiratory, digestive, skeletal, urinary, endocrine, lymphatic, nervous, and reproductive systems. With the use of 3-D animation, microphotography, and endoscopic procedures one goes on a fascinating journey through the human body learning just enough about each system to understand what makes us tick. A fast-paced traditional style of delivery is used to present anatomical detail and the physiology of each system.

Introducing the Cell

Out-of-print

Support Resource

© 1995

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video introduces the cell as the basic unit of life common to all organisms. Plant and animal cells are shown and compared using microscopes and clearly illustrated drawings. Various cell components are discussed with multiple analogies that clarify the functions of each part. Cell differentiation is discussed with reference to the human body and its epidermal muscle, white and red blood cells, nerve and bone cells. A 10-question multiple-choice quiz is included with the video.

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LRC Order No.: Est. Price:

Lakes & Ponds

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855289

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

In this video, Bill Nye explains how lakes and ponds are formed, and how rain, rivers, waterfalls and underground aquifers are part of a larger system of water flow—both above and below ground. Later, Nye describes the diverse sizes and shapes of water bodies found around Earth and the variety of living things found in them. The movement of pollutants through water is introduced, followed by a brief description of pollution's impacts on freshwater organisms. A short, point-form summary and a song by "The Froggy Boyz" are also included.

Light Optics

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855227

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
							✓							

Light is very complex, and the mysterious ways in which it works are better understood after watching Bill Nye and guest stars Penn and Teller, demonstrate its properties. This fascinating and informative video examines light optics, and helps young science students understand the importance of this topic. He shows what happens when light bounces off a surface, how light can bend, and how colours appear. The explanations are relieved by healthy doses of music and Nye's clever blend of comedy and education.

© Alberta Education, Alberta, Canada

Light and Optics: from Lenses to Polarisation: Containing over 16 Fully Interactive Simulations (Windows Version)

LRC Order No.: 469818 (Single User) Est. Price: $86.90

LRC Order No.: 469826 (5-User) Est. Price: $196.35

Physics Simulation

Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
							✓							

This CD-ROM provides a set of simulations that show how light beams interact with a variety of optical components including plane mirrors, spherical mirrors, convex lenses, systems of two lenses, telescopes, microscopes, the human eye, and diffraction gratings. The program is suitable for classroom demonstrations in which students are asked to predict, and then observe, the effect of a change to an optical setup.

Note:

• Although primarily suited for use as a teacher demonstration tool, this resource may also be suitable for direct use by the more capable student.

Marine Life

LRC Order No.: 479031 Est. Price: $81.10

Animal Life and Beyond

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

This video describes the diversity of living things found in ocean environments. Examples of pelagic organisms (surface dwelling and free swimming) and benthic organisms (bottom dwelling) are shown. Key features of marine environments are described, and adaptations to those environments are illustrated and explained.

© Alberta Education, Alberta, Canada

Microscopic Life Forms

Animal Life and Beyond

Support Resource

© 1998

LRC Order No.: **479049** **Est. Price:** **$81.10**

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video introduces students to three forms of microscopic life: monera, prostita and fungi. The video identifies representative organisms from each of the kingdoms, and shows general characteristics of each group using high magnification video sequences and computer animations. Reproduction of bacteria and other microorganisms in the environment, as well as the role of bacteria in human health, is described. This video is short, fast paced and conveys information in an accessible manner.

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LRC Order No.: Est. Price:

Mixtures and Solutions (Video; Teacher's Guide; Pre-Test; Post-Test)

Physical Science

Support Resource **Vendor Direct**

© 1998

Marlin Motion Pictures Ltd.; 211 Watline Avenue, MISSISSAUGA ON L4Z 1P3
Telephone: 888–260–2232; 905–890–1500 Internet: http://www.marlineducation.com

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓									

This video provides a basic overview of concepts related to the mixture and flow of matter. The emphasis is on the classification of various types of mixtures. Topics covered include mixtures, homogeneous versus heterogeneous, colloids, suspensions, solutions, solutes and solvents, solubility, saturated versus unsaturated, and solubility graphs. The video presents the concepts in related groupings, providing a visual definition as each new concept is introduced. Blackline masters include pre- and post-viewing tests, a video quiz, experiments, a word search, discussion questions, and an Internet lesson. The teacher's guide provides a script of the narration and suggestions for integrating the blackline masters and video to form lessons.

Note:

- The video does not provide particle theory explanations for all of the concepts that are introduced.
- The demonstration of factors affecting solubility shows stirring occurring as part of the surface area demonstration and the temperature demonstration. This can be explained as being a controlled variable in the experimental process.
- Solubility graphs for copper (II) sulphate and dissolved oxygen are shown in a non-standard format. The manipulated variable, termperature, is shown on the y axis and the responding variable, the amount of solute dissolved, is shown on the x axis.

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LRC Order No.: 530601 Est. Price: $20.30

Nelson Science & Technology Skills Handbook

Authorized Teaching Resource

© 2000 **Author(s):** Alldred, N.; Haberer, S.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This Skills Handbook provides students with additional opportunities to develop appropriate skills that are an integral part of the Science program. It describes the process of scientific inquiry and includes activities that allow for the application of the process. Also included are activities that apply the problem solving cycle, the use of research skills, the use of equipment in science and technology, or the development or improvement of skills in observing, recording, analyzing, and communicating data. The resource describes some practical steps and habits that improve study skills and two strategies for organizing information, including concept maps and computer spreadsheets or other databases.

Although many activities are not unit specific, those that are course related best fit units B and D of the grade 8 Science program. This resource would be useful for remedial work with grade 9 students still weak in specific skills relevant to the science program.

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LRC Order No.: Est. Price:

Oceanography

Bill Nye the Science Guy

Support Resource

© 1998

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855229

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

Get the current information as Bill Nye demonstrates the qualities and importance of ocean water. His exuberant eclectic style piques viewer interest in answers to questions about where all the water came from, why ocean water is salty, what causes currents, how currents are studied, and why currents are important. The water cycle is reviewed by making it analogous to a demonstration of water distillation. Other demonstrations help explain currents in terms of differences in temperature and salt content. In his repetitive way, Bill Nye emphasizes the importance of ocean currents to ocean organisms and to people. The presentation culminates with a song about currents, sung to the music of the Beach Boy's hit song "California Girls." This resource supports the grade 8 Science Program, Unit E: Freshwater And Saltwater Ecosystems; Outcomes 1, 2, 3 & 4.

Oceans

470518 $399.80

National Geographic Geokit

Authorized Teaching Resource

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

This resource is a comprehensive multimedia kit on oceans, including transparencies, student articles for reproduction, a set of trivia cards, a map, a poster, a 115-page teacher guide, and three videos titled "Oceans in Motion," "The Living Ocean," and "Half a Mile Down." The resource introduces the physical characteristics of oceans and provides a broad survey of oceans as ecosystems, covering such topics as the sea floor, tides, waves, currents, climate, icebergs, coral reefs, biomes and ocean pollution. Outlines for several challenging activities are included. Activity outlines provide background, objectives, preparations, procedures and sample student data pages.

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LRC Order No.: 510950 Est. Price: $114.75

Oceans: Charting the Vastness

Survey of Science: Earth Science Essentials

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

Oceans cover over 70% of the earth's surface and have a significant influence on the planet's geology, life, and climate. This video explores the geology of the ocean floor, the composition of ocean water, the dynamics of ocean currents and tides, the formation of shoreline features, and the influence of the ocean on weather patterns. Effective animation is used to illustrate tide formation. The video also outlines the diversity of marine life in tidal pools, estuaries, kelp forests, and around deep sea vents. The video closes with a look at oil, gas and other resources and their extraction from below the sea.

Oceans - Climate Explorer (Windows / Macintosh Version)

472134 $114.75

Earthstation Library

Authorized Teaching Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

This interactive multimedia resource focuses on oceanography and meteorology, providing a comprehensive exploration of the relationships between water and Earth's climate. Over 600 MB of exercises, images, videos, games, experiments, demos and puzzles are included in the program. The video clips cover topics ranging from the structure of the ocean to human activities and climate. An extensive glossary is also provided.

Note:

- This is a resource for teachers, but is also suitable as a reference source for more advanced students.

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LRC Order No.: 467804 Est. Price: $10.80

Pond & River

Eyewitness

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

This video, part of a series based on the EYEWITNESS books, provides students with live action photography and video footage of the freshwater habitats of ponds and rivers. The program explores how rivers and ponds form; examines water quality, river flow, erosion and deposition; and describes plant and animal interactions, biodiversity and adaptations in river and pond environments. The video also includes segments addressing the roles of rivers and ponds in human history and societies. The process of making the film and the use of special effects are presented at the end of the tape.

Note:

- Different cultural/religious beliefs about rivers are briefly described.

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LRC Order No.: Est. Price:

The Prairies

Water Under Fire

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 2062403

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

The use of water for a variety of human activities has impacted water quality and has altered the environment. Part one of this two part video analyzes the effects of water usage by the tar sand operations in northeastern Alberta, and takes a critical look at the impact of the Bennett Dam on the delta region of Lake Athabasca. Also assessed is the impact of chemical contaminants released into the surface water by the mining industry in the Northwest Territories and the melting of the permafrost due to global warming. Part 2 of this resource explores the effects of human activities on the water in specific regions of eastern Canada. Effluent released by pulp mills into the St. John River and contamination of ground water by agricultural operations in Prince Edward Island are presented in some detail. Focus in given to agricultural practices in the Annapolis Valley of Nova Scotia which have had a significant effect on water quality and quantity of available water. Water purification systems of major centers such as Halifax are also looked at from the perspective of water quality degradation. This resource support the grade 8 Science Program, Unit E: Freshwater and Saltwater Systems.

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LRC Order No.: 480905 Est. Price: $75.35

Properties of Matter

Physical Science in Action

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
		✓			✓									

This resource explores the physical properties of matter through the format of a young student on a field trip presenting what she has learned. The video first explains the concepts of matter and the atom. Once this foundation is established, the resource investigates phases of matter (explained in terms of atomic arrangement and movement of particles) and how matter behaves in the natural world. Physical properties of matter—such as mass, weight, volume and density—are presented. Common applications of density differences, such as hot air balloons, are identified. Important concepts and terms are defined and described through graphics and interpretive animations. Demonstrations are also used to illustrate concepts: for example, how density causes one liquid to float on another and how this can reverse with temperature change.

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	LRC Order No.:	Est. Price:
• **Properties of Matter: Student Guide and Source Book**	**536873**	**$23.90**
• **Properties of Matter: Teacher's Guide**	**536881**	**$202.80**

Science and Technology for Middle Schools

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓									

This activity-based resource explores matter from three perspectives: physical properties, chemical properties, and mixtures. Interesting details are included about matter, its use, and its behaviour in the natural world. Physical properties such as mass, weight, volume, and density are explored through a variety of activities. Effects of temperature on density are presented with common applications of density differences such as in hot air balloons. Phases of matter are explained in terms of kinetic energy of particles. Mixtures and solutions are also covered along with methods of separating components. Common elements are examined as well as their arrangement on the periodic table. The exploration of chemical reactions includes investigations of rusting and metal corrosion by acids. This resource includes a student guide and a teacher guide.

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LRC Order No.: 479221 Est. Price: $81.10

Respiration

Our Human Body

Support Resource

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video provides a focused, easy to follow look at the basics of breathing. It begins by introducing the concepts of aerobic and anaerobic respiration and their purposes for the organism. It then gives an effective overview of the various methods that organisms use to carry out respiration, beginning with simple structures and progressing to complex systems for respiration. Examples include direct diffusion, cutaneous respiration, bronchial respiration, tracheal respiration and the human respiratory tract. The video uses appropriate graphics and visual cueing to enhance students' understanding of the concepts.

Note:

- There are several non-metric references made to lung and breath capacities.

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	LRC Order No.:	Est. Price:
• **ScienceFocus 8 (Student Text)**	**449729**	**$76.20**
• **ScienceFocus 8: Teacher's Resource Binder** (with Blackline Masters on CD-ROM) (Macintosh / Windows Version)	**449737**	**$268.30**
• **ScienceFocus 8: Teacher's Productivity Package** (Macintosh / Windows Version 4.0) (includes Teacher's Resource; Blackline Masters; Illustrations)	**508400**	**$156.95**
• **ScienceFocus 8: Illustrations CD-ROM** (Macintosh / Windows Version 4.0)	**451881**	**$197.10**

ScienceFocus 8: Science • Technology • Society

Basic / Authorized Teaching Resource

© 2001 **Author(s):** Edwards, L. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓	✓	✓	✓	✓					

This student book and teacher's materials provide direct support for the Alberta program of studies for Grade 8 Science. Together these resources provide a very extensive set of learning activities, and background readings for students and teachers. Numerous Canadian and Alberta examples are provided. The student text includes preview and review sections with each chapter, a science skills guide and a glossary of key terms. The teacher resource includes general sections on science safety, student assessment, course materials, and blackline masters, as well as detailed unit guides including an introduction, teacher background and instructional suggestions.

The Scientific Method

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 2065501

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					

This resource presents nine steps in developing a theory using scientific method, and defines and explains different types of variables. Three individual investigations are used to show the scientific method in practice and highlight the individual steps. Pacing, examples and graphics are appropriate for a junior high audience. This resource could be used at the beginning of each unit of study to reintroduce students to the scientific method.

LRC Order No.: Est. Price:

Simple Machines

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855210

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
								✓						

Over the centuries we have devised a variety of simple machines to make it easier to perform many everyday tasks. Bill Nye explains the concept of simple machines in this episode of the Bill Nye the Science Guy series. He climbs aboard a roller coaster and takes his bike to the "Tour du Science" to demonstrate how man has devised methods for making work easier. He inserts his trademark of humor and parody to create a fun learning atmosphere as he proceeds through his explanations of pulleys, levers, ramps, wedges, wheels and screws. The music video in this episode is "ABCs of Machinery," a takeoff of "ABC" by the Jackson 5. This resource supports the grade 8 Science Program, Unit D: Mechanical Systems.

Simple Machines (Videocassette with Teacher's Guide)

485492 $191.20

Motion, Energy and Force

Authorized Teaching Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
								✓						

Our world is full of simple machines that aid in our daily routines. This video identifies common, everyday simple machines, and demonstrates their practical use. Work and power are defined and calculated in real-life applications that illustrate mechanical advantage and efficiency. Machines discussed include levers, inclined planes, pulleys, wheel and axle, screws, and wedges.

LRC Order No.: 414780 Est. Price: $24.35

Solutions

Authorized Teaching Resource

© 1990 **Author(s):** Marson, R.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓									

This teacher resource book provides background information, lesson outlines and blackline masters for 28 learning activities on chemical solutions, suitable for Grade 8. Topics developed in this resource include rate of dissolving, solubility curves, filters, distillation, water purification, water of hydration, and the interaction of oil and water. Reproducible student activity cards are included. Key steps in the activities are outlined and illustrated.

Water Cycle

Bill Nye the Science Guy

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

In his usual lighthearted style Bill Nye examines the water cycle. This solar driven cycling of water has been going on since the earth formed and is an integral part of weather. His explanation of what is happening at the molecular level is supported by animations and a "molecular machine." Practical examples of evaporation, condensation, boiling and freezing, are presented throughout the video and several activities are described that students can try on their own. Bill demonstrates how a miniature cloud can be formed using a bell jar and tire pump. Glaciers and oceans serve as backdrops and frequent rain showers take place as Bill hits his key points about the water cycle. This resource supports the grade 5 Science Program, unit E: Weather Watch and the grade 8 Science Program, Unit E: Freshwater And Saltwater Systems; Outcomes 1.

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LRC Order No.: 482183 Est. Price: $69.50

Water Erosion and Landforms (Video and Guide)

Earth Science

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This video looks at water as the most powerful erosional force on Earth. The video begins with a distinction between weathering and erosion, leads into an animated description of the water cycle, then examines the erosion processes associated with glaciers, streams and rivers, and waterfalls. It presents some interesting visual examples of land forms shaped by water action and, with the use of effective animations, provides an interpretive explanation of their formation. The formation of V-shaped valleys of young rivers is explained, as is the formation of meanders and oxbow lakes connected with more mature streams. Some attention is given to sediment, floods, flood plains, as well as various means of controlling flooding. A summary of the major points and a final note about the constant evolution of land forms complete the video.

482208 $69.50

Waves (Video and Guide)

Science Key Concepts: Physics

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
							✓							

This short video deals with the transfer of energy in the form of waves, including sea waves, laser light waves, earthquakes, and the natural frequency of waves in a bridge. The video explains wavelength and frequency of waves, as well as the difference between transverse and longitudinal waves. Effective animations are used to demonstrate each type and to show that the medium oscillates in one place but the energy is passed along. Reflection of waves, including light, is demonstrated, and the application of this property is shown in a variety of situations. Demonstrations of light refraction are also presented and discussed. Total internal reflection of light within an optic fiber is described, along with applications of this property in today's global communications systems.

Wetlands

Bill Nye the Science Guy

Support Resource

© 1998

LRC Order No.: **Est. Price:**

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 855257

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓									✓					

A variety of wetland ecosystems are examined, as Bill Nye the Science Guy takes viewers on a wetland journey and explains the importance of wetlands to humans and global ecosystems. Using models, Bill shows how wetlands—including marshes, streams, shorelines, and estuaries—help store water and filter water, thus helping to prevent floods and improve water quality. The importance of wetland conservation is stressed. Most examples are generic and some are recognizably based on the USA. This program supports Science topic 5E *Wetland Ecosystems*, Unit 7A: *Interactions and Ecosystems*, and Unit 8E *Freshwater and Saltwater Ecosystems*.

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• Wetlands Ecosystems II: Interactions and Ecosystems: Student Journal: Middle School Science Grades 7 to 8 — LRC Order No.: 415481 — Est. Price: $6.80

• Wetlands Ecosystems II: Interactions and Ecosystems: Educator's Guide: Middle School Science Grades 7 to 8 — LRC Order No.: 415499 — Est. Price: $6.80

Wetlands Ecosystems II: Interactions and Ecosystems

Support / Authorized Teaching Resource

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperatu..	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
									✓					

This student manual and teacher manual were developed to support the study of wetland ecosystems by Alberta students in Grade 8. Linked to the accompanying teacher manual, the student manual provides background information, illustrations and space for students to enter specific observations, information and analysis. Each of the 14 activities outlined in the teacher manual are correlated to the Alberta program of studies and include a vocabulary list, learning outcomes, a materials list, and a description of the activity. The manual also contains blackline masters that illustrate the classification of wetland organisms and provide guidance in some specific techniques. Both classroom and field activities are described in this guide. Changes to this new edition include editing the resource to improve its clarity and conciseness, rephrasing the learner outcomes to align with the Pan-Canadian Science Framework, deleting two lessons, and reformatting the student book to standard letter size.

What Are Glaciers? — LRC Order No.: 467838 — Est. Price: $81.10

Earth, the Environment and Beyond

Support Resource

© 1992

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
				✓					✓					

This video introduces what a glacier is and how it forms, describes how and where glaciers move, and presents the history of glaciers. It also describes the effects of glacial erosion and the landform it creates.

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The World of Living Things (with Teacher's Guide)

Biology: The Science of Life

Authorized Teaching Resource

© 2001

LRC Order No.: **513368** **Est. Price:** **$69.50**

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
						✓								

This video explores the question "What is life?" Viewers will learn what characteristics are shared by all living things and the significance of each to life itself. They can then explore the great variety of life forms on Earth and discover how they are grouped into five kingdoms. This video provides a brief description of each kingdom and gives examples of organisms that belong to each group. It culminates with a True-False quiz as a review of the major concepts covered.

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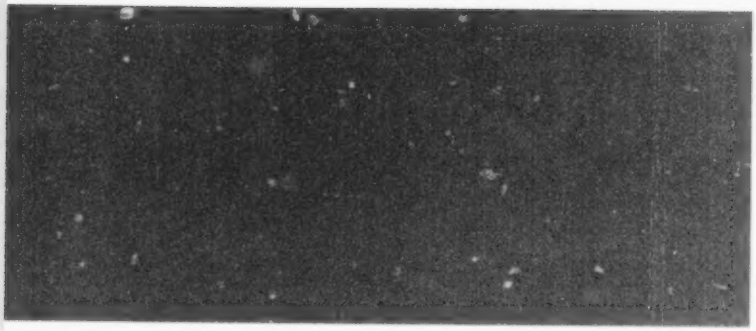
Science



Grade 9

November 2005

GRADE 9
Units A, B, C, D, E

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Basic Learning Resources				
Addison Wesley Science in Action 9 Series				
Science in Action 9 (Student Text)	2002	Basic / Authorized 9A / 9B / 9C / 9D / 9E	470675	$78.20 LRC
Science in Action 9: Teacher's Resource Package	2002	Authorized Teaching 9A / 9B / 9C / 9D / 9E	470683	$324.90 LRC
ScienceFocus 9 Series				
ScienceFocus 9: Science • Technology • Society (Student Text)	2002	**Basic** 9A / 9B / 9C / 9D / 9E	470625	$75.65 LRC
ScienceFocus 9: Science • Technology • Society: Blackline Masters CD-ROM (Macintosh / Windows Version)	2002	Authorized Teaching 9A / 9B / 9C / 9D / 9E	470732	$195.00 LRC
ScienceFocus 9: Science • Technology • Society: Teacher's Resource Binder (includes Teacher's Resource CD-ROM (Macintosh / Windows Version))	2002	Authorized Teaching 9A / 9B / 9C / 9D / 9E	470633	$291.95 LRC

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GRADE 9
Unit A - Biological Diversity

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Animal Adaptation	1996	Support 9A	510843	$69.50 LRC
Animal Adaptations *Animal Life in Action Series*	2000	Support 9A	510918	$56.80 LRC
NEW Beneath the Caribbean (Video and Implementation Guide) *Beneath the Sea Series Series*	2001	Support 9A		LRC
		Beneath the Caribbean (DVD and Implementation Guide)	563280	$69.55
		Beneath the Caribbean (Video and Implementation Guide)	563272	$46.35
NEW Beneath the North Atlantic (CD-ROM) *Beneath the Sea Series Series*	2001	Support 9A		LRC
		Beneath the North Atlantic (CD-ROM)	563347	$69.55
		Beneath the North Atlantic (DVD)	563339	$69.55
		Beneath the North Atlantic (Video)	563321	$46.35
NEW Beneath the South Pacific (CD-ROM) *Beneath the Sea Series Series*	2001	Support 9A		LRC
		Beneath the South Pacific (CD-ROM)	563298	$69.55
		Beneath the South Pacific (DVD)	563313	$69.55
		Beneath the South Pacific (Video)	563305	$46.35
NEW Introduction to Biotechnology - Videoactive	2001	Support 9A	BPN 2074001	ACCESS–The Education Station
Return of the Peregrine	2001	Support 9A / 9C	BPN 2044801	ACCESS–The Education Station
Right Whales *Champions of the Wild Series*	1998	Support 9A	520892	$57.90 LRC
NEW Science Lab Safety	1998	Support 9A, 9B, 9C, 9D, 9E	BPN 2063801	ACCESS–The Education Station
Swift Foxes *Champions of the Wild Series*	1998	Support 9A	520909	$57.90 LRC
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
NEW Biodiversity *Global Environmental Change Series*	1997	Authorized Teaching 9A	535601	$17.75 LRC

GRADE 9 (continued)
Unit A - Biological Diversity

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Genetics: The Molecular Basis of Heredity (with Teacher's Guide) *Elements of Biology Series*	2002	Authorized Teaching 9A	525090	$69.50 LRC
Habitats: Realm of the Tiger *National Geographic Geokit Series*	1998	Authorized Teaching 9A	506199	$399.80 LRC
Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0) *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508450	$312.85 LRC
Nelson Science 9: Transparencies *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508468	$312.85 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC

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GRADE 9

Unit B - Matter and Chemical Change

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW Atomic Structure and the Periodic Table *Physical Science Series Series*		Support 9B	607054	$69.50 LRC
Reactivity of Elements *Science Key Concepts: Chemistry Series*		Support 9B	513243	$69.50 LRC
NEW Science Lab Safety	1998	Support 9A, 9B, 9C, 9D, 9E	BPN 2063801	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0) *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508450	$312.85 LRC
Nelson Science 9: Transparencies *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508468	$312.85 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC

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GRADE 9

Unit C - Environmental Chemistry

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
Investigating Water Pollutants (Kit)	1999	Support 9C	510447	$98.50 LRC
Return of the Peregrine	2001	Support 9A / 9C	BPN 2044801	ACCESS–The Education Station
NEW Science Lab Safety	1998	Support 9A, 9B, 9C, 9D, 9E	BPN 2063801	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC

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GRADE 9

Unit D - Electrical Principles and Technologies

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW Electrical Current *Bill Nye the Science Guy Series*	1998	Support 9D	BPN 855218	ACCESS–The Education Station
NEW Electricity *Popular Mechanics for Kids (Season I) Series*	2001	Support 9D	BPN 2069201	ACCESS–The Education Station
Electricity: How It Works	2000	Support 9D	510926	$97.35 LRC
NEW Electricity: The Invisible River of Energy *Survey of Science Series: Physics Essentials Series*	1996	Support 9D	607749	$155.25 LRC
Electricity: The Invisible River of Energy (Macintosh / Windows Version 2.0) *AIMS Interactive Science Essentials Series*	1997	Support 9D	511081	$81.05 LRC
Energy Machines and Motion: Student Guide and Source Book *Science and Technology Concepts for Middle Schools Series*	2000	Support 8D / 9D	522335	$178.55 LRC
NEW Renewable Energy: The Search for Endless Energy (with Teacher's Notes)	1999	Support 9D	BPN 2061701	ACCESS–The Education Station
NEW Science Lab Safety	1998	Support 9A, 9B, 9C, 9D, 9E	BPN 2063801	ACCESS–The Education Station
Authorized Teaching Resources				
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC
Energy Machines and Motion: Teacher's Guide *Science and Technology Concepts for Middle Schools Series*	2000	Authorized Teaching 8D / 9D	522343	$173.85 LRC
Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0) *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508450	$312.85 LRC
Nelson Science 9: Transparencies *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508468	$312.85 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC

GRADE 9
Unit E - Space Exploration

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
Support Learning Resources				
NEW The Amazing Universe *Astronomy Series*	2003	Support 9E	BPN 2071401	ACCESS–The Education Station
NEW At Home in the Galactic City (Episode 3) *Cosmic Highway 1 Series*	1998	Support 9E	BPN 2062901	ACCESS–The Education Station
NEW Exploring Mars *The National Series*	2002	Support 9E	BPN 2074501	ACCESS–The Education Station
NEW Hubble's Universe (Episode 22) *Cosmic Highway 2 Series*	1998	Support 9E	BPN 2062902	ACCESS–The Education Station
NEW Liftoff to Learning Series (includes All Systems Go; Microgravity; Assignment - Spacelab!) *Liftoff to Learning Series*	1999	Support 9E	BPN 2074100	ACCESS–The Education Station
NEW Living on the Planets: The Moon, Mars and Biosphere 2 (includes Teacher's Notes)	2001	Support 9E	607856	$97.35 LRC
Out of Sight: A Study of Life and Physical Phenomena in Space *Science Links Series*	2000	Support 9E	508442	$10.30 LRC
NEW Passport to the Solar System Series (includes Solar Systems; Our Star, The Sun; Four Rocks Near the Sun; Gas Giants; Small Bodies and Cosmic Collisions; Exploring the Solar Sytem and Beyond) *Passport to the Solar System Series*	2001	Support 9E		LRC
	Solar Systems		547010	$46.30
	Our Star, The Sun		547028	$46.30
	Four Rocks Near the Sun		547036	$46.30
	Gas Giants		547044	$46.30
NEW The Saga of Apollo 13 *Expanding Frontiers: The Exploration of Space Series*	2000	Support 9E	563264	$104.25 LRC
NEW Science Lab Safety	1998	Support 9A, 9B, 9C, 9D, 9E	BPN 2063801	ACCESS–The Education Station
Stars and Galaxies (Macintosh / Windows Version) *NGS PictureShow Series*	1998	Support 9E	509052	$108.95 LRC
Turn Left at Alpha Centauri *Science Links Series*	1998	Support 9E	508434	$10.30 LRC
Authorized Teaching Resources				
Astronomy *National Geographic Geokit Series*	1998	Authorized Teaching 9E	506181	$399.80 LRC
Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)	2000	Authorized Teaching General / 7A / 7B / 7C / 7D / 7E / 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	434803	$11.80 LRC

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GRADE 9 (continued)
Unit E - Space Exploration

Series / Title	Copyright Date	Status / Unit(s)	LRC Order No.	Price
The Earth, Moon & Sun with Paper Plates, Bottles, Tennis Balls and Simple Things	1993	Authorized Teaching 9E	415051	$30.15 LRC
NEW The Inner Planets *Astronomy Series*	2003	Authorized Teaching 9E	607575	$191.20 LRC
Nelson Science 9: Computerized Assessment Bank (Macintosh / Windows Version 1.0) *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508450	$312.85 LRC
Nelson Science 9: Transparencies *Nelson Science 9 Series*	2000	Authorized Teaching 9A, 9B, 9D, 9E	508468	$312.85 LRC
NEW Nelson Science & Technology Skills Handbook	2000	Authorized Teaching 8A / 8B / 8C / 8D / 8E / 9A / 9B / 9C / 9D / 9E	530601	$20.30 LRC
NEW The Outer Planets *Astronomy Series*	2003	Authorized Teaching 9E	607583	$191.20 LRC
NEW Passport to the Solar System: Implementation Guide *Passport to the Solar System Series*	2001	Authorized Teaching 9E	547078	$88.10 LRC
Solar System: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 9E	509078	$96.65 LRC
Stars and Galaxies: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies) *NGS Picture Pack Series*	1998	Authorized Teaching 9E	509060	$90.40 LRC

Grade 9: Annotated Bibliography (alphabetical listing)

	LRC Order No.:	Est. Price:
• **Addison Wesley Science in Action 9 (Student Text)**	**470675**	**$78.20**
• **Addison Wesley Science in Action 9: Teacher's Resource Package**	**470683**	**$324.90**

Addison Wesley Science in Action 9

Basic / Authorized Teaching Resource

© 2002 **Author(s):** Mah, K. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓	✓	✓	✓	✓

This student book provides direct support for the Alberta program of studies for Grade 9 Science. It presents concept development and scientific facts relevant to the program, and an extensive set of learning activities for students. Each chapter includes an introductory outline, an overview, a summary review section, a science toolbox for skill development, and a glossary of key terms. Numerous Canadian and Alberta examples are included.

© Alberta Education, Alberta, Canada

LRC Order No.: Est. Price:

The Amazing Universe

Astronomy

Support Resource

© 2003

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 2071401

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

The immensity of the universe is beyond imagination but we are beginning to unravel some of its mysteries. This video begins with a quick look at our solar system, finds its relative position in the Milky Way Galaxy, and then proceeds to explore outward into the depths of space. It explains what makes up a galaxy and the cohesive force that defines and maintains its variant shape. It looks at the various types of stars and their characteristic colours, and at the formation of supernovae, neutron stars and black holes, all of which exist in our Milky Way and the billions of other galaxies that make up the universe. It identifies and discusses the origin of several constellations that can be seen in the night sky, explains the concept of the light-year, and describes the general features of comets. The video culminates with a fill-in-the-blank review quiz. This enclosed Teacher's Guide includes answers to quiz questions, a preliminary test, video review test, post test, several student activity masters including Calculating the Speed of Light, Points of Interest in the Night Sky, and Trouble with Hubble, and general vocabulary connected with this topic.

Animal Adaptation

510843 $69.50

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This program defines and provides multiple examples of animal adaptation to various environments. Features that help an organism survive in aquatic and terrestrial environments are illustrated from simple to complex animals, with reference to structural, functional and behavioural adaptations. The resource draws on ideas of Darwinian evolution in interpreting various phyla from simple cnidarian to more complex vertebrates, and in explaining specific adaptations related to gas exchange, temperature regulation, and body support. Teacher resource materials for pre- and post-viewing are provided on a single supplementary page.

LRC Order No.: Est. Price:

Animal Adaptations (Video with Teacher's Guide) 510918 $56.80

Animal Life in Action

Support Resource

© 2000 **Author(s):** Bense, P. (Teacher's Guide)

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This video presents a wide variety of animal adaptations, from the giraffe's long neck to the hummingbird's ability to fly backwards, in a fast-paced, informative format. A teacher's guide outlines pre- and post-viewing activities and discussion questions. The video touches on sexual reproduction, diversity within species, natural versus artificial selection, and how characteristics are passed from generation to generation.

Astronomy 506181 $399.80

National Geographic Geokit

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This multimedia kit is a comprehensive resource on astronomy that includes transparencies, three videos, student articles for reproduction, a set of trivia cards, a map, a poster, and a 115-page teacher guide. The resource provides a broad survey of the major concepts of astronomy: celestial bodies, technological developments such as the Galileo probe and the Hubble telescope, and the history and myths surrounding the stars. Lesson plans are provided to develop concepts, with objectives and assessment ideas included. The videos are titled "Exploring Our Solar System," "Stars and Constellations," and "Sun, Earth, Moon."

LRC Order No.: Est. Price:

At Home in the Galactic City (Episode 3)

Cosmic Highway 1

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2062901

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This video is a great introduction to where Earth is in the Milky Way. It shows the history of mapping galaxies and shows how we know we are on the outer edge of our galaxy. It gives a general description of how a radio-telescope works and shows how our knowledge of other galaxies can be applied to our own galaxy.

Atomic Structure and the Periodic Table

607054 $69.50

Physical Science Series

Support Resource

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
											✓			

This 18-minute video examines atomic structure, including subatomic particles and introduces the terms atomic mass, atomic number and isotopes. An explanation of the link between atomic structure and organization in the Periodic Table is completed using simplified visual diagrams and words. Information referenced on a Periodic Table, as well, a cursory examination of Periodic Table groups is also presented. This video provides a teacher's guide and student worksheet package including pre- and post-video tests, video worksheet, word search, Internet research and experiment outlines and teacher keys. This resource supports the Grade 9 Science Unit B: Matter and Chemical Change.

LRC Order No.: 434803 Est. Price: $11.80

Be Safe! A Health and Safety Reference for Science and Technology Curriculum: K-9 (Canadian Edition)

Authorized Teaching Resource

© 2000 **Author(s):** Agban, J. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This Canadian edition has been thoroughly revised in light of the *The Common Framework of Science Learning Outcomes* (Council of Ministers of Education Canada, 1997). This safety resource contains advice on such diverse topics as "Making Things," "Testing Things," "Food and Hygiene," "Heating and Burning," "Chemicals," "Electricity," "Animals," "Plants," "Micro-organisms," "Optical Instruments" and "Studies Out of School."

- **Beneath the Caribbean (Video and Implementation Guide)** — **563272** — **$46.35**
- **Beneath the Caribbean (DVD and Implementation Guide)** — **563280** — **$69.55**

Beneath the Sea Series

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This series presents unique survival and reproduction adaptations of plant and animal life in three different marine environments. Unlike the plankton rich waters of the temperate zone, the Caribbean Sea is warm and clear and essentially nutrient poor. In order to live in these food scarce conditions, sea creatures have evolved complex methods for capturing food. Teacher support materials are included with activity suggestions prior to viewing as well as during and after viewing of these resources. Worksheets and multiple choice questions with answers are included. The programs are available in video or CR-ROM format.

	LRC Order No.:	Est. Price:
• **Beneath the North Atlantic (CD-ROM)**	**563347**	**$69.55**
• **Beneath the North Atlantic (DVD)**	**563339**	**$69.55**
• **Beneath the North Atlantic (Video)**	**563321**	**$46.35**

Beneath the Sea Series

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This series presents unique survival and reproduction adaptations of plant and animal life in three different marine environments. The plankton rich waters of the North Atlantic provide ample food sources for a broad diversity of marine life.

• **Beneath the South Pacific (CD-ROM)**	**563298**	**$69.55**
• **Beneath the South Pacific (DVD)**	**563313**	**$69.55**
• **Beneath the South Pacific (Video)**	**563305**	**$46.35**

Beneath the Sea Series

Support Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This series presents unique survival and reproduction adaptations of plant and animal life in three different marine environments. This video highlights biodiversity of the tropical Pacific where sharks, eels, giant clams, turtles and dolphins flourish.

© Alberta Education, Alberta, Canada

LRC Order No.: 535601 Est. Price: $17.75

Biodiversity

Global Environmental Change

Authorized Teaching Resource

© 1997 **Author(s):** NSTA Press

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

Explore the concept of biodiversity and why preservation of species is important. This resource delves into local biodiversity but also gives special attention to the tropical rain forests in Costa Rica. It explains the value of diversity of species to the stability of ecosystems and assesses the value of diversity in eco-tourism, the pharmaceutical industry, local human use, and for the sake of its inherent value. Included are student activities on analyzing diversity in their local ecosystem, classifying life zones, examining rain forest products and materials, analyzing keystone species, and critically assessing the management of rain forests through role playing. The information connected with the local biodiversity activity is relevant to the Bellingham, Washington area of the U.S.

The Earth, Moon & Sun with Paper Plates, Bottles, Tennis Balls and Simple Things

415051 $30.15

Authorized Teaching Resource

© 1993 **Author(s):** Marson, R.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This well-illustrated teacher resource book provides background information, lesson outlines and blackline masters for 20 learning activities on Earth, moon and sun. Topics developed in this resource include the development and interpretation of models, and a variety of techniques for measuring and describing position and motion of bodies observed in the day and night sky. Blackline masters include simple tools for measuring and recording elevation and azimuth of objects observed.

LRC Order No.: Est. Price:

Electrical Current

Bill Nye the Science Guy

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 855218

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

In his dynamic style, Bill Nye the Science Guy explores the fascinating topic of electricity. Through an interactive question-and-answer format and hands-on activities, he defines electricity, electrical circuits, electrical power, electrons and other fundamental aspects of this topic. The program includes a teacher's guide filled with suggestions for extension activities and classroom experiments. This resource supports the grade 9 Science Program, Unit D: Electrical Principles and Technologies.

Electricity

Popular Mechanics for Kids (Season I)

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2069201

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

This upbeat video explores the wonder and power of electricity. Two teen hosts have graphic encounters with electricity and electrical technologies, which allows them to demonstrate the nature and properties of electricity. Static electricity is explored with a Van de Graaff generator, which extends to an explanation of lightning and the aurora borealis. The foundational work of Benjamin Franklin, Thomas Edison and Michael Faraday is briefly covered. Using effective models and graphics, energy conversions in electric motors are explained and extended to large, industrial electromagnets. An electric vehicle, the new Ford Ranger, is featured and the environmental advantages highlighted. Converting the energy of geothermal vents and wind into electricity, electromagnetic trains, electricity in the body (heart focus), and electric eels are all featured, demonstrating the many sources and applications of electricity. This energetic and engaging video would provide a good introduction to the unit on electricity.

LRC Order No.: 510926 Est. Price: $97.35

Electricity: How It Works

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

This Australian-produced video shows that basic electrical principles remain constant regardless of where you are in the world. Topics covered include static and current electricity, electron pumps (devices that cause electrons to move, such as wet cells, generators, thermocouples and photovoltaics) and a brief description of alternating current, direct current and how diodes can be used. The video demonstrates general electrical principles, but does not explore any one area in detail.

Electricity: The Invisible River of Energy (Macintosh / Windows Version 2.0)

LRC Order No.: 511081 Est. Price: $81.05

AIMS Interactive Science Essentials

Support Resource

© 1997

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

This dual platform (Macintosh and Windows) CD-ROM offers a general overview of how electricity works. The resource discusses the following topics: static electricity, current electricity, conductors, voltage, circuits (series and parallel), resistance (Ohms and amperes), switches, circuit breakers, watts, magnetic fields, light, heat, and motors. The CD is set up as a QuickTime video with demonstrations of each concept. A glossary of terms is included and directly linked to the video: when you check a term in the glossary, the QuickTime video automatically starts at the relevant point. A quiz (with immediate feedback) and a test (with feedback at end of the test) are provided. The resource is easily navigated, with a menu of options on the left hand side. Icons are large and easily understood. This resource could be used individually, or with a group using a projector.

LRC Order No.: 607749 Est. Price: $155.25

Electricity: The Invisible River of Energy

Survey of Science Series: Physics Essentials

Support Resource

© 1996

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

This video delves into the nature of electricity and how we are able to manage it in our daily use. To understand electricity requires some knowledge of atomic structure and the behavior of subatomic particles. Once this is explained, the video looks at how electricity can be generated, how it can be turned into useful mechanical energy and how we are able to safely control its flow through circuits. A distinction is made between static and current electricity and characteristic features and effects of electricity are explored. Terminology including electron, ion, coulomb, voltage, circuit, resistance, ampere, and ohm are introduced and defined as they arise in the course of development. The presentation has a rapid pace and is content heavy.

LRC Order No.:	Est. Price:
522335	$58.45
522343	$173.85

- **Energy Machines and Motion: Student Guide and Source Book**
- **Energy Machines and Motion: Teacher's Guide**

Science and Technology Concepts for Middle Schools

Support / Authorized Teaching Resource

© 2000 **Author(s):** Hanson, C. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
								✓					✓	

This activity-based resource teaches students about electrical energy, simple machines, and moving vehicles. The resource includes interesting details connected with these topics, as well as historical information on the scientific contributions made by well-known scientists such as Galileo, Volta, Davies, Edison, Newton and Watt. The concepts of force, work and power are presented, along with sample calculations. Mechanical advantage and efficiency of simple machines are also covered. The student guide includes background information, reading selections, safety tips, and step-by-step instructions to guide students through their classroom inquiries.

The guide supports teachers in using *Energy, Machines and Motion* in the classroom. The guide provides background material on science and pedagogy, guidance on the preparation and setup of kit materials, and detailed instructions for facilitating classroom science investigations. It also includes blackline masters, and assessment strategies, tools and scoring rubrics.

Note:

- Safety considerations will be an important factor in deciding which of the activities are suitable for independent and teacher-guided study.

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LRC Order No.: Est. Price:

Exploring Mars

The National

Support Resource

© 2002

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 2074501

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

Hitch wonderous rides to Mars on several space probes from Viking 1 and 2 to the more recent Mars Odyssey to get a closer look at this fascinating red planet. With the use of video clips and photos taken by various probes, this video presents all of what we currently know about the planet and why there is still a chance that life may exist there. The more we learn the more enthralled we become with what is there. Bob MacDonald, the narrator, points out the need for another surface landing and the exploration and analysis of Martian rocks and soil. He discusses Canada's contribution to the Mars exploration program and Canada's future technological involvement.

The content of this video is based on our knowledge about Mars up to and including the information provided by Mars Odyssey that went into orbit around Mars in October of 2001. It does not include more recent information acquired by NASA's Mars Exploration Program that sent the two rovers Spirit and Opportunity to the planet's surface in January of 2004.

Genetics: The Molecular Basis of Heredity (with Teacher's Guide) 525090 $69.50

Elements of Biology

Authorized Teaching Resource

© 2002 **Author(s):** Freeman, B. (Teacher's Guide)

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This resource provides a comprehensive look at genetics in an engaging 20-minute video. The video is broken up into sections on DNA, chromosomes, genes, mitosis, meiosis, patterns of inheritance, mutations, and cell differentiation. The accompanying teacher's guide includes excellent blackline masters to support the video. A complete transcript is also provided to support students of varying abilities. At the end of the video, a quiz is presented to check for student understanding.

LRC Order No.: 506199 Est. Price: $399.80

Habitats: Realm of the Tiger

National Geographic Geokit

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

Habitats: Realm of the Tiger introduces students to the biology and ecology of the tiger. This is an integrated teaching package with connections to science, social studies, language arts and mathematics. The complete kit requires a minimum of ten 60-minute lessons to complete; however, it can be used in segments. All lessons require some teacher preparation, but instructions are easy to follow. Overviews, lessons, color overheads, posters, blackline masters, and videos are all included. This resource could provide an alternate context to cover most of the outcomes related to biodiversity.

Hubble's Universe (Episode 22)

Cosmic Highway 2

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2062902

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

The Hubble Space Telescope is a technological marvel that has changed the way we look at space. This video takes a look at how and why the Hubble Space Telescope was created. The Hubble Deep Field, photographed in 1995, is explored. This video gives a great impression of just how many galaxies and stars there are.

LRC Order No.: 607575 Est. Price: $191.20

The Inner Planets

Astronomy

Authorized Teaching Resource

© 2003

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

Start with a quick tour of the Milky Way Galaxy and then focus in on our sun and the inner portion of our solar system. This video presents an explanation of how the solar systems formed, based on the premise proposed by the Nebular Theory. It then proceeds to explore some significant details of what we know about the sun, and the inner planets - Mercury, Venus, Earth, and Mars. Included are the contributions made by Copernicus, Kepler, and Newton to our understanding of the general structure and behavior of the solar system. The characteristic features of each planet are somewhat limited but do provide an introduction to how the inner planets differ from one another and what makes Earth so unique. The video culminates with a fill-in-the-blank review quiz. This resource includes a teacher's guide consisting of: answers to quiz questions, a preliminary test, video review test, post test, weightlessness in space activity, weight on other planets activity, impact of craters, and general vocabulary.

Introduction to Biotechnology - Videoactive

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

BPN 2074001

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

This video covers the use of biotechnology in plants, animals and in human medicine. Trangenics, the insertion of one organism's DNA into another organism, and cloning are covered in depth. There is a brief but effective review of cell division that includes discussion of chromosomes, DNA, genes, mitosis and meiosis. Three multiple choice quizzes of five questions each are inserted into the video and a final ten question quiz summarizes the main points. (Answers are not provided.) The video concludes with a brief discussion of the potential concerns or negative effects of biotechnology.

LRC Order No.: 510447 Est. Price: $98.50

Investigating Water Pollutants (Kit)

Support Resource

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
												✓		

This comprehensive kit includes detailed student and teacher guides, along with enough materials for ten groups to test two water samples for each of seven factors (Cl, Cu, phosphates, dissolved O_2, nitrates, hardness and pH). Unknown water samples are included to ensure positive tests for various pollutants. The kit is an easy-to-use, skills-based resource. A 1-800 number is provided for technical support.

Liftoff to Learning Series (includes All Systems Go; Microgravity; Assignment - Spacelab!)

Liftoff to Learning

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2074100

© 1999

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This series of videos takes a basic look at the challenges of living and working on the space shuttle. The entire series is shot on the shuttle, using astronauts as the actors. The environment on the shuttle is perfect for illustrating the technologies used to survive space, and the difficulties of spending long periods of time in microgravity. The delivery may be young for grade nine, but the visuals are worthwhile.

- All Systems Go: Biology and medical science meet as scientists determine what happens to a human body as it moves through space and reacts to microgravity.
- Microgravity: This video demonstrates how space experiments in microgravity are used to make advances in fluid physics, biotechnology and combustion research.
- Space Lab: This video illustrates proper lab procedure in space experiments and the importance of planning when designing them.
- Space Basics: This video demonstrates the science of orbitry, explaining how and why objects orbit a planet. It also considers the requirements for getting into space and returning safely.

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LRC Order No.: Est. Price:

Living on the Planets: The Moon, Mars and Biosphere 2 — 607856 — $97.35

Support Resource

© 2001 **Author(s):** Born, A. (Teacher's Notes)

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This video investigates the technological developments necessary for humankind to colonize Mars and the Moon. Special interest is paid to the requirements for life that must be met for this to happen: oxygen, water, and food production. Also mentioned are the reasons we would want to settle on Mars and the Moon. The "Biosphere 2" project is used as an example of the steps scientists are currently taking to study the viability of humans living in space.

- **Nelson Science 9: Computerized Assessment Bank** (Macintosh / Windows Version 1.0) — **508450** — **$312.85**
- **Nelson Science 9: Transparencies** — **508468** — **$312.85**

Nelson Science 9

Authorized Teaching Resource

© 2000 **Author(s):** Plumb, D. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓	✓		✓	✓

This user-friendly CD-ROM program contains 1,000 questions to support the Nelson Science 9 student text, covering concepts related to matter, reproduction, electricity and space. Features include "Build A Test," "Random Test Generator" and a comprehensive assessment guide with an assessment philosophy and skills-based rubrics provided. Multiple choice, short answer, extended answer, and performance tasks are included, and can be easily edited. Questions are rated by achievement category and correlated with the Ontario science curriculum, which can be easily related to the Alberta program. The software will run with most word processors (Mac or PC format).

LRC Order No.: 530601 Est. Price: $20.30

Nelson Science & Technology Skills Handbook

Authorized Teaching Resource

© 2000 **Author(s):** Alldred, N.; Haberer, S.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

This Skills Handbook provides students with additional opportunities to develop appropriate skills that are an integral part of the Science program. It describes the process of scientific inquiry and includes activities that allow for the application of the process. Also included are activities that apply the problem solving cycle, the use of research skills, the use of equipment in science and technology, or the development or improvement of skills in observing, recording, analyzing, and communicating data. The resource describes some practical steps and habits that improve study skills and two strategies for organizing information, including concept maps and computer spreadsheets or other databases.

Although many activities are not unit specific, those that are course related best fit units B and D of the grade 8 Science program. This resource would be useful for remedial work with grade 9 students still weak in specific skills relevant to the science program.

Out of Sight: A Study of Life and Physical Phenomena in Space

508442 **$10.30**

Science Links

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

Science Links is an integrated science curriculum consisting of 14 self-contained modules, each built around a theme of interest to teens. *Out of Sight* is one of two modules focused on space and space exploration. It covers ten topics, each with background readings, step-by-step instructions for investigations, and discussion and homework questions. The hands-on exploratory activities suggested for small groups follow a consistent instructional process, allowing students to make the connection between science and their everyday lives. Topics covered in this module include: power to explore space, intermolecular forces, weightlessness, living in space, gravitational force, alien life forms, the expanding universe and stars.

LRC Order No.: 607583 Est. Price: $191.20

The Outer Planets

Astronomy

Authorized Teaching Resource

© 2003

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

For thousands of years people have looked up at the night sky pondering the limits of our solar systems. Our fascination with space and other planets in our solar system has led to the construction of powerful telescopes, and to the launch of spacecraft sent to get a more detailed view of these celestial bodies. This video takes a brief look at the sun and the inner planets, including the unique nature of earth, then presents what has been learned about the gaseous giant outer planets. It looks at the elliptical nature of planetary orbits and distinguishes between rotation and revolution. Attention is given to some of the most distinctive features each planet and its moons. Although the characteristic features presented for each planet are somewhat limited they do provide an introduction to how the outer planets differ from one another. The video culminates with a fill-in-the-blank review quiz. This resource includes a teacher's guide consisting of: answers to quiz questions, a preliminary test, video review test, post test, weightlessness in space activity, weight on other planets activity, impact of craters, and general vocabulary.

	LRC Order No.:	Est. Price:
• **Exploring the Solar Sytem and Beyond**	**547060**	**$46.30**
• **Four Rocks Near the Sun**	**547036**	**$46.30**
• **Gas Giants**	**547044**	**$46.30**
• **Our Star, The Sun**	**547028**	**$46.30**
• **Small Bodies and Cosmic Collisions**	**547052**	**$46.30**
• **Solar Systems**	**547010**	**$46.30**
• **Passport to the Solar System: Implementation Guide**	**547078**	**$88.10**

Passport to the Solar System

Support / Authorized Teaching Resource

© 2001

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

Exploring the Solar System and Beyond - Take a technological look at space exploration. Get a sense of the complexity of space exploration and why we need to get beyond the atmosphere with our observational technology. This video provides a look at the technology that is presently used in studying the universe and our solar system. Our ability to send spacecraft to other planets requires the use of all our knowledge in physics. Controlling satellites and exploratory spacecraft is a challenge but constantly improving. We now have landing crafts and mobile machines to sample and explore planetary surfaces. Over the next thirty years space exploration will likely lead to some of the most exciting discoveries known about our solar system, galaxy and the universe. This video presents the great potential for a variety of careets in the field of space exploration.

Four Rocks Near the Sun - The mission of this trip is to discover what makes the first four planets so different from each other. This video takes you on an interplanetary tour of Mercury, Venus, Earth, and Mars, exploring all of what we have learned through spacecraft visits. With the use of spacecraft images and excellent animation, this video goes on a brief tour of the four terrestrial planets, then, proceeds into comparative planetology. It explores planetary size, sources of energy (internal heat versus solar energy), crustal activity, atmospheric composition, water, and the greenhouse effect on each planet to show the significance of each in creating conditions suitable for life. This analysis supports our understanding of why life is found on earth but also suggests the possibility of life on Mars. This video gives an excellent comparative analysis of the terrestrial planets in our solar system.

Gas Giants - The mission of this trip takes you amongst the planetary giants of our solar system. Hitch a ride on a voyager spacecraft to get a spectacular view of Jupiter, Saturn, Uranus, and Neptune. This video explores all of what we have learned about each planet through spacecraft visits. With the use of spacecraft images and excellent animation, it looks at the planetary structure and size, atmospheric composition and circulation, temperature, and the moons of these planets. There is some indication that Jupiter's moon, Europa, may have

LRC Order No.: Est. Price:

liquid water below it's frozen surface, providing suitable conditions for life. Saturn is not the only planet with rings and is the most volcanic place in the solar system. Find out what has happened to the great dark spot on Neptune and what will be the mission of the Cassini spacecraft.

Our Star, The Sun - Fix your gaze on our nearest star to learn the latest facts about this radiant member of the solar system. Extended studies and recent images of the sun now give us extensive knowledge about its physical features and a good understanding of how it works. This video explains why it is called a magnetic variable star, what causes sun's spots, and the cause and effects of coronal mass ejection's. Find out why our sun is classified as an average star and how much longer it will last. This comprehensive presentation of what is known about the sun makes effective use of visual images and animations.

Small Bodies and Cosmic Collisions - Catch a ride on the tail of a comet through the Asteroid Belt, Kuiper Belt, and beyond to the Ort Cloud. This video explores what we know of the origin and structure of comets, meteors, and asteroids. Get a glimpse of the surface of Eros, one of the largest asteroids, through the lens of a camera on board NASA's satellite NEAR which landed on the asteroid's surface. Discover the objective of the Stardust Mission and whether we can avoid further collisions with asteroids that may be heading earth's way.

Solar Systems - Take a fascinating tour of our solar system to get a sense of its wonders. This video begins with a brief look at the sun then explores each planet, highlighting some distinctive features of each on its trip outward to Pluto. Recent images of the planets, moons, and small bodies of the solar system are included along with excellent animation of planets, travel through space, and in the development of abstract ideas and concepts. The birth of the universe with its varied composition and the astrological history of the solar system from the Big Bang to the present are explored. Astronomers give their insights into gravity, the value of exploring our solar system, the discovery of planets around other stars and possibility of life on other worlds. This fast-paced video makes a good introduction to astronomy.

Reactivity of Elements

513243 **$69.50**

Science Key Concepts: Chemistry

Support Resource

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
											✓			

This 15-minute video explores the reactivity of elements and their placement on the periodic table. The video is divided into three parts. Part 1 examines the reactivity of the alkali metals; part 2 examines the reactivity of the halogens; and part 3 explores the range of reactivity among metals. Various chemical reactions, along with their reaction equations, are shown in order to demonstrate to students the trends in reactivity. Computer animation is used to illustrate the placement of elements and reactivity trends on the periodic table. The accompanying print material includes background information, suggested discussion questions, and two possible experiments.

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LRC Order No.: Est. Price:

Renewable Energy: The Search for Endless Energy (with Teacher's Notes)

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

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BPN 2061701

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
													✓	

This video showcases a number of renewable energy sources and the technology currently available for converting these into useful energy. The main focus is on conversion of solar power into useful energy by photovoltaic cells and by thermochemical reaction. A good description of how a photovoltaic cell creates electricity is presented. The video also investigates a reversible chemical reaction using ammonia that can generate virtually an endless supply of thermal energy. The description of how a generator works is too briff, but the description of how modern windmills work is very good. The presentation culminates with storage of electrical energy in modern vanadium batteries and the concept of "energy payback."

Comments:

- Slightly complex in explanations and chemical formulas.

Return of the Peregrine

Support Resource

ACCESS–The Education Station / Regional Resource and Urban Media Centres

© 2001

BPN 2044801

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
					✓		✓			✓		✓		

This 48-minute video presents an engaging look at the peregrine falcon's decline after WWII and the realization that DDT was causing a problem in egg reproduction. It follows two Alberta scientists through their struggles and successes in trying to save this species. The captive breeding program in and around Edmonton shows both successes and limitations of human interventions to minimize loss of species diversity.

LRC Order No.: 520892 Est. Price: $57.90

Right Whales

Champions of the Wild

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

The *Champions of the Wild* series deals with various endangered species and the people who are trying to save them. This video focuses on right whales, an endangered species that lives off both of Canada's coasts. The video examines why these animals are being threatened, giving background on whaling and on the modern dangers to the whales. The video also explores what actions are being taken to protect the right whales and their habitats, focusing on the work of Dr. Moira Brown and Deborah Tobin, who founded East Coast Ecosystems, an organization dedicated to the conservation and monitoring of right whales. This resource could be used to illustrate to students different ways that the public can help to protect a specific species.

The Saga of Apollo 13

563264 $104.25

Expanding Frontiers: The Exploration of Space

Support Resource

© 2000

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

In April of 1970, a seemingly routine mission to the moon went disastrously awry, leaving the crew of Apollo 13 stranded in space. This program details the amazing story of their rescue, as NASA technicians defied the odds and made history in the process. This video is one part of a comprehensive overview of the programs and the people who made travel and exploration into space a reality. It features documentary footage and simulations, as well as interviews with astronauts, NASA directors, engineers, scientists, and other space experts involved with the Apollo 13 mission.

LRC Order No.: Est. Price:

Science Lab Safety

Support Resource

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ACCESS–The Education Station / Regional Resource and Urban Media Centres
BPN 2063801

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓	✓	✓	✓	✓

The laboratory is an exciting place of discovery but it requires a strict set of behavioral guidelines and knowledge about safety equipment. A student narrator provides a checklist of proper laboratory clothing, outlines safety precautions, and safe handling procedures for working safely in school science laboratory. Use of emergency equipment and rules of conduct and behavior are demonstrated by students as these points are presented. Knowing the location and use of the first aid kit, fire extinguisher, fire blanket, and emergency exits, for example, can be critical in case of emergency. There are rules for handling animals and a set of symbols (not WHMIS) for identifying the dangers associated with specific substances that might be used in the laboratory. WHMIS symbols should be covered as a supplement to this video presentation.

	LRC Order No.:	Est. Price:
• **ScienceFocus 9 (Student Text)**	**470625**	**$75.65**
• **ScienceFocus 9: Teacher's Resource Binder** (includes Teacher's Resource CD-ROM (Macintosh / Windows Version))	**470633**	**$291.95**
• **ScienceFocus 9: Blackline Masters CD-ROM** (Macintosh / Windows Version)	**470732**	**$195.00**

ScienceFocus 9: Science • Technology • Society

Basic / Authorized Teaching Resource

© 2002 **Author(s):** Lindenberg, D. et al.

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓	✓	✓	✓	✓

This student text provides direct support for the Alberta program of studies for Grade 9 Science. The resource provides an extensive set of learning activities and background readings for students. The student text includes preview and review sections with each chapter, a science skills guide, and a glossary of key terms. Numerous Canadian and Alberta examples are included.

The comprehensive *Teacher's Resource Binder* is a valuable complement to the *ScienceFocus 9* student textbook. It provides a variety of teaching strategies for this program, relevant ICT outcomes that tie into Grade 9 Science, as well as the curricular correlation of activities and concepts developed. Course apparatus and materials are listed for each of the five units. Also included is a section on microchemistry, a technique of using smaller quantities of chemicals, and one on laboratory safety. All of this information is integrated into each unit to assist teachers in their lesson planning and effective delivery of the course content.

The *Blackline Masters CD-ROM* gives teachers convenient access to all the blackline masters developed for each unit of the Grade 9 Science program, as well as those intended for student review of course material and a number designed as teacher assessment tools.

LRC Order No.: 509078 Est. Price: $96.65

Solar System: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This set of transparencies contains colourful representations of the planets, moons and asteroids. Both paintings and photographs are used to show a variety of images similar to those in the corresponding NGS PictureShow CD-ROM. The resource is suitable for Science 9E: Space Exploration, and could be used to stimulate students' interest.

Stars and Galaxies (Macintosh / Windows Version) **509052 $108.95**

NGS PictureShow

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This CD-ROM examines the distribution of matter in the universe, including the properties and classes of stars, and the classes and formation of galaxies. The majority of the information is delivered through two multimedia presentation files using narration, music and images. Students can copy and paste or print the text or pictures for research purposes. The resource also comes with basic assessment sheets and classroom activities. The still images supplied in this CD-ROM are also available in the corresponding transparency pack.

LRC Order No.: 509060 Est. Price: $90.40

Stars and Galaxies: NGS Picture Pack Transparencies (includes Teacher's Guide and 40 Transparencies)

NGS Picture Pack

Authorized Teaching Resource

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Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

This set of transparencies includes images of white dwarfs, red and blue giants, neutrons stars, pulsars, nebulae, and the typical life cycle of a star. Also included are interesting details about distant spiral, elliptical and irregular galaxies. Information for each transparency is included in a teacher's guide. This resource would be useful as an interest catcher when covering Unit E: Space Exploration.

520909 **$57.90**

Swift Foxes

Champions of the Wild

Support Resource

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Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
										✓				

The *Champions of the Wild* series deals with various endangered species and the people who are trying to save them. This video deals specifically with the extirpation of swift foxes in Canada, revealing how these animals were brought virtually to extinction by plowing and animal poisoning. The main focus of the video is the struggle of the Smeeton family to breed the foxes in captivity for reintroduction in the wild. The video highlights one of the primary obstacles that Clio Smeeton has faced: the Canadian government's belief in translocation rather than breeding captive animals has meant Smeeton must sustain her reserve through private funding.

LRC Order No.: 508434 Est. Price: $10.30

Turn Left at Alpha Centauri

Science Links

Support Resource

© 1998

Grade 7					Grade 8					Grade 9				
Unit A Interactions and Ecosystems	Unit B Plants for Food and Fibre	Unit C Heat and Temperature	Unit D Structure and Forces	Unit E Planet Earth	Unit A Mix and Flow of Matter	Unit B Cells and Systems	Unit C Light and Optical Systems	Unit D Mechanical Systems	Unit E Freshwater and Saltwater Systems	Unit A Biological Diversity	Unit B Matter and Chemical Change	Unit C Environmental Chemistry	Unit D Electrical Principles & Technologies	Unit E Space Exploration
														✓

Science Links is an integrated science curriculum consisting of 14 self-contained modules, each built around a theme of interest to teens. *Turn Left At Alpha Centauri* is one of two modules focused on space and space exploration. It covers 13 topics, each with background readings, step-by-step instructions for investigations, and discussion and homework questions. The hands-on exploratory activities suggested for small groups follow a consistent instructional process, allowing students to make the connection between science and their everyday lives. Topics covered in this module include: life-support systems in space, measuring weight in space, weightlessness, gravity and orbits, craters and cosmic collisions, elements and their spectrum, survey of the planets, stars and their colour, red shift, cosmic distance and parallax angle, and the expanding universe.

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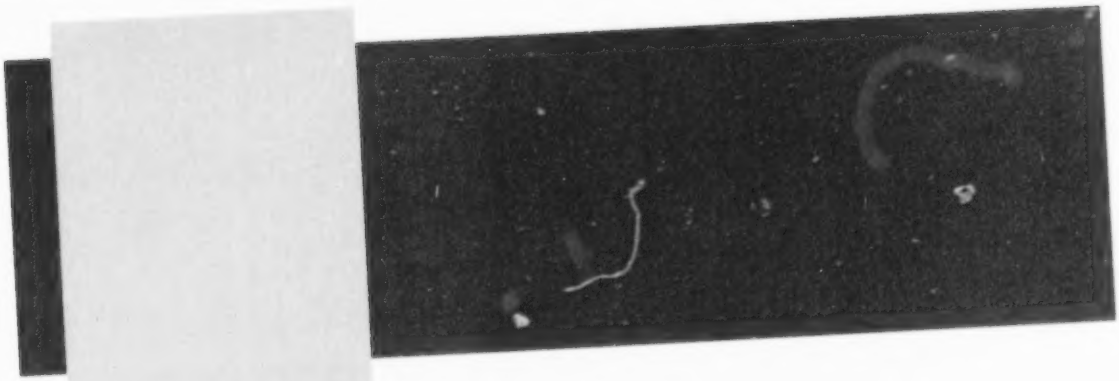

Science

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November 2005

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